



# Status of major projects supplement

Water performance report 2016-17

1 March 2018



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## Overview to major projects in 2016-17

The commission's approved pricing determinations for the 2013-14 to 2017-18 pricing period include 100 major capital projects for the 17 urban water corporations. We monitor the progress of these projects to track how water corporations are performing against their proposals made in 2012-13. Table 1 summarises the status of each corporation's scheduled major projects at the end of 2016-17.

**Table 1** 2016-17 snapshot of major projects scheduled for 2013–18

	No. major projects	Completed on time	On-schedule	Completed late	Cancelled	Deferred	Delayed
Melbourne Water	6	2		2			2
City West	4	3					1
South East	6	1	1	3		1	
Yarra Valley	5	1	1	1		1	1
Barwon	7	4			1	1	1
Central Highlands	7	3	4				
Coliban	7	3		1			3
East Gippsland	4	1	1			2	
Gippsland	3	2		1			
Goulburn Valley	6	2				3	1
GWMWater	8	6		1		1	
Lower Murray	6	3				1	2
North East	5	1	1	2		1	
South Gippsland	5	1		1		1	2
Wannon	7		1	4		2	
Western	8				2	4	2
Westernport	6	2	1	1		1	1
<b>TOTAL</b>	<b>100</b>	<b>35</b>	<b>10</b>	<b>17</b>	<b>3</b>	<b>19</b>	<b>16</b>

The pricing determinations listed 61 projects due for completion by the end of 2016-17. Of these, 44 (74 per cent) have been completed, with 13 projects delayed, 13 deferred and two cancelled.

Of the 100 projects due by the end of 2017-18, a total of 52 major projects have been completed by the end of 2016-17, with another 10 projects still proceeding on schedule. 35 projects are either delayed or deferred, with 23 of these 35 projects now expected to be completed in the next pricing period.

Gippsland Water has completed all three projects listed in its price determination, with GWMWater completing seven of its eight projects and one deferred four years to be completed in 2019-20. Central Highlands Water has completed three projects on time, with the remaining four projects proceeding on schedule.

Coliban Water, Goulburn Valley Water, North East Water, Wannon Water and Western Water have the majority of their projects recorded as delayed, deferred or completed late.

Three projects have been cancelled: one by Barwon Water as an alternative, more cost efficient option was identified; and two for Western Water due to slower growth and recent planning outcomes.

## **Read all of our 2016–17 water performance resources**

Find all of our 2016-17 performance information at [www.esc.vic.gov.au/water/annual-performance-reports](http://www.esc.vic.gov.au/water/annual-performance-reports), including:

- our annual report comparing the performance of the 16 urban water businesses
- this supplement discussing how water businesses are tracking on major project delivery
- 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 2013–18 pricing period, water corporations included their proposed major capital investment projects that were to be progressed or completed during the period. Some projects commenced in the 2008–13 pricing period, but now incur major capital expenditure in the current period. The commission’s final pricing determination for each corporation includes a scheduled list of these projects allowed for in pricing, along with the anticipated completion year.

Customers’ prices include recovering capital investment costs in accordance with this approved project schedule. Therefore, it is appropriate water corporations explain delays or alterations to their project schedules, because approved funds will flow from pricing whether the expenditure is incurred or not.

This section tracks the corporations’ progress against their original schedule of projects.

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 corporation 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 corporation. 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 corporations, 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 16 projects listed as delayed this year, the reasons provided by the water corporations included:

- four projects were delayed as a result of change in delivery program or priorities
- three projects encountered planning, permit or licence issues
- three projects were delayed due to funding issues
- two projects required further investigation or detailed design work
- one project was affected by contractor issues
- one project was delayed to resolve community concerns.

Water corporations did not explain the delays for the remaining two projects, but these projects will mostly be completed within one year of the original target completion date.

## 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 corporations 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.

The water corporations identified the following reasons for deferring 19 projects:

- six projects were postponed because of slower than expected customer demand growth
- five projects were deferred because a provisional upgrade or alternate facility effectively 'bought time'

- three projects required additional time for further design or assessment of alternatives
- two projects were deferred due to the identification of alternative options
- two projects were deferred following further analysis of the supply demand strategy
- one project was deferred due to delays in land use planning in a future growth area.

Of the 19 projects:

- two were deferred one to two years and are still scheduled for completion within the 2013–18 pricing period
- Seventeen were deferred to the next pricing period.

In addition to the deferrals, three projects were cancelled as they were no longer required.

By way of comparison, water corporations deferred 14 of 120 major projects scheduled for the 2008–13 pricing period to the 2013–18 pricing period or beyond. Another five were cancelled or suspended indefinitely due to changing requirements and circumstances.

## **New projects for 2013–18**

Four new major capital projects have been identified for delivery in 2013–18 that were not included in price determinations:

- GWMWater completed its Wimmera Mallee Pipeline augmentation project in 2015-16, which had Commonwealth and Victorian Government funding.
- North East Water has two new water security projects for Beechworth and Goorambat that are proceeding on schedule.
- Wannon Water has a wind energy project that will reduce costs at its Portland site. The project has been delayed by a year, but will be completed in 2017-18.

Six major projects have been carried over from the previous period across City West Water, South East Water, Central Highlands Water, Gippsland Water and Lower Murray Water. These projects were not specified in the price determinations for the 2013–18 period.<sup>1</sup> Of these, three are now completed, with one still on schedule. One has completion delayed until 2017-18, and one has completion deferred until 2018-19 because demand was lower than planned.

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<sup>1</sup> Many major capital investment projects that were underway and mostly completed at the end of the 2008–13 pricing period had incurred much of the expenditure. The remaining expenditure to be incurred in the 2013–18 pricing period did not put the project into the water corporations's 'major project' category.



Table 2 provides details for each scheduled project for each water corporation, including:

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

Table 2 also includes some projects from the 2008–13 pricing period that were not completed before the end of 2012-13, and were therefore carried over into the current 2013–18 pricing period. All major capital projects will be monitored through to their completion.

**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
<b>Melbourne Water</b>						
St Albans-Werribee pipeline — stage 2	2013-14	2015-16	2014-15	2016-17	Completed late	Practical completion was granted to the contractor in December 2016. The project was completed well under budget. The pipeline is now fully operational.
Water mains renewals — North Essendon—Footscray	2013-14	2015-16	2014-15	2016-17	Completed late	The project was delayed due to finalising the licence agreement between Melbourne Water and Essendon Airport Pty Ltd. This is now finalised and the project, which was originally scheduled for completion in 2015-16 is now forecast for completion in October 2016.
Western Treatment Plant capacity augmentation — stage 2	2013-14	2016-17	2014-15	2018-19	Delayed	Siteworks began early February 2017. Major earthworks have been completed. Approximately 75 design and construction personnel on the project. The project is currently on schedule to the revised time and within budget.
Western Treatment Plant sludge drying augmentation	2013-14	2015-16	2013-14	2015-16	Completed on time	This project has achieved Practical Completion on schedule and under budget in August 2015.
Water main renewals — Preston	2013-14	2016-17	2013-14	2017-18	Delayed	Site pipe laying continues with 2,070 m of pipe laid. The project is currently on schedule to the revised time and within budget. Project was delayed in 2015-16 as prolonged period required to resolve community concerns over the reinstatement plans for the St Georges Rd centre median.
Sewer main rehabilitation — North Yarra	2013-14	2017-18	2013-14	2015-16	Completed on time	The project was completed in October 2015.

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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
<b>City West Water</b>						
West Werribee dual water supply scheme	Carried over	2016-17	2010-11	2017-18	Delayed	The project (which will deliver both recycled and potable water assets) began delivery of potable water to customers in 2014 via the potable water network and a blend of recycled water and potable water to customers via the recycled water network in November 2016. The project is scheduled for completion in 2018 and will allow the delivery of fully recycled water to meet customer needs.
Office relocation	2013-14	2013-14	2013-14	2013-14	Completed on time	Practical completion of fit out works for the new Brooklyn Maintenance occurred in April 2014. Practical completion of the fit out for the new Footscray head office facility occurred in June 2014. Staff relocated from Sunshine to the Footscray office in July 2014.
Program Arrow	2013-14	2015-16	2011-12	2017-18 (R2)	Delayed	The Arrow program is a corporation transformation program to upgrade CWW's corporation systems. The program was made up of three distinct releases, two of which will be implemented during the third regulatory period. They are: <ul style="list-style-type: none"> <li>• Release 1 (finance, contract, procurement etc.) which went live in May 2014, and</li> <li>• Release 2 (asset management and field mobility) which will go live on 1 August 2017.</li> </ul> The proposed Arrow Release 3 (billing and customer management) will be delivered as one or more future projects.
Aquifer storage and recovery - construction	2013-14	2017-18	2015-16	2015-16	Completed on time	The construction of the West Werribee ASR scheme was completed on schedule. The operational trial started in July 2017 and is expected to be completed by mid-2018. It is expected it will take 2-3 years to grow the plume to the point the water can be extracted. Water extracted from the scheme will be used to supply peak recycled water demands.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>City West Water (continued)</b>						
Stormwater projects (various)	2013-14	2017-18	2010-11	2016-17	Completed on time	<p>The following stormwater schemes are now complete and operational:</p> <p>Keilor Public Golf Course and Green Gully Stormwater Harvesting schemes (completes November 2013) supplying up to 83 ML per year of fit-for-purpose storm water.</p> <p>Paisley Park Stormwater Harvesting scheme (completed October 2013) supplying up to 42 ML per year of fit-for-purpose storm water.</p> <p>Laverton Recreational Reserve Stormwater Harvesting scheme is completed. Some improvements are currently under consideration. The scheme will be able to deliver up to 88.8 ML per year of fit-for-purpose storm water</p> <p>Afton Street Stormwater Harvesting scheme (complete August 2015) delivering up to 20 ML per year of fit-for-purpose storm water.</p> <p>Lake Caroline Stormwater Harvesting scheme (completed in November 2016) supplying up to 52 ML per year of fit-for-purpose storm water.</p> <p>Laverton Recreational Reserve Stormwater Harvesting scheme (completed January 2017) supplying up to 88.8 ML per year of fit-for-purpose storm water.</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
<b>South East Water</b>						
Sherbrooke sewer backlog scheme reticulation	Carried over	2013-14	2013-14	2015-16	Completed late	This project was completed in 2016. 80% of properties have connected to the reticulation system.
Pound Road sewerage pump station	2013-14	2013-14	2013-14	2014-15	Completed late	This project was completed in February 2015. Electricity connection to and a substation for the site were delayed, deferring commissioning.
Cranbourne recycled water tank	2013-14	2013-14	2013-14	2014-15	Completed late	This project was completed early in 2015, slightly behind schedule. The project was delivered for \$7.3 million against an approved \$11.1 million.
Mt Martha treatment plant — long term sludge upgrade	2013-14	2014-15	2013-14	2015-16	Completed late	This project was completed a little behind schedule in November 2015. The delay was due to unforeseen issues with upgrading the existing infrastructure without disrupting the plant performance.
Boneo treatment plant capacity upgrade	2013-14	2016-17	2016-17	2018-19	Deferred	Interim works and operational changes have allowed the next major upgrade, including both activated sludge and sludge drying works, to be delayed until 2018-19 without adverse impacts.
Lang Lang treatment plant upgrade	2013-14	2016-17	2014-15	2016-17	Completed on time	This construction of the Lang Lang treatment plant upgrade was completed in February 2017. The commissioning phase of the contract is currently underway.
Dromana–Portsea backlog scheme	2013-14	Beyond 2017-18	2013-14	2018-19	On schedule	Final reticulation and transfer main construction completed in 2015 and in operation. Portsea, Sorrento, Blairgowrie, Rye and St Andrews Beach property connections continuing beyond 2018 as originally planned. As at June 2017, 3078 properties have been connected to the network.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Yarra Valley Water</b>						
Warrandyte North sewerage project	2013-14	2013-14	2014-15	2016-17	Completed late	Project completed and sewers declared available for connection in December 2016.
Donvale sewerage project	2013-14	2015-16	2013-14	2017-18	Delayed	The commencement of construction has been delayed by planning approval timeframes. The project is being delivered as four construction packages. One package has been completed, three are currently underway and scheduled for completion in 2017-18.
Amaroo branch sewer	2013-14	2016-17	2014-15	2016-17	Completed on time	This project has been completed, Practical Completion was awarded on 29 June 2017.
Lockerbie branch sewer	2013-14	2017-18	2018-19	2020-21	Deferred	The project was deferred following an upgrade of the Wallan Sewage Treatment Plant to accept additional flows and produce Class A recycled water. Completion is rescheduled for 2021. The treatment plant upgrade avoided construction of irrigation assets that would become redundant when the Lockerbie main sewer is commissioned.
Epping branch sewer tunnel	2016-17	Ongoing–2020	2017-18	2018-19	On schedule	Growth has now triggered delivery of the project. Department of Treasury and Finance approval has been gained for the project and the Board has approved commencing construction. Construction work will commence late in 2017 with completion targeted for early in 2019.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Barwon Water</b>						
Torquay West high level feeder main	2013-14	2013-14	2018-19	2023-24	Deferred	Deferred due to delays in the land use planning for this future growth area.
Apollo Bay bulk water supply expansion	2013-14	2014-15	2010-11	2014-15	Completed on time	This project commenced during the 2008–13 pricing period, and continued into the current period. The project was completed according to the revised schedule in January 2014.
Pettavel water basin upgrade	2013-14	2014-15	2013-14	2014-15	Completed on time	The project was completed in 2014-15.
Black Rock water reclamation plant hydraulic capacity upgrade	2013-14	2015-16	2013-14	2017-18	Delayed	The upgrade to the Black Rock Inlet works was initially delayed due to the principle contractor going into voluntary administration and a substantial quality defect (valves) delaying the start of commissioning. Whilst works under the contract are now substantially complete and the works have reached a point of operational reliability at Average Dry Weather Flow, the testing and commissioning process has highlighted a serious capacity deficit with the works only performing at around 45% of the specified requirement. Responses from the Principal Contractor have been unsatisfactory, and various contractual remedies are being considered to rectify the defective works. It is likely that the work of rectification could take another 4-6 months to complete. The requirement for additional capital funding will be dependent on the decision around preferred commercial resolution.
West Lara transfer system	2013-14	2015-16	2013-14	2015-16	Completed on time	This project was completed in 2015-16.
Aireys Inlet pipeline (replaces Aireys Inlet Water Treatment Plant Upgrade)	2014-15	2016-17	2013-14	2016-17	Completed on time	This project was completed in 2016-17.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Barwon Water (continued)</b>						
Inverleigh low level feeder main	2015-16	2017-18			Cancelled	An alternative more cost efficient staged investment is being implemented to meet growing water demand in Teesdale and Inverleigh. This comprises Bannockburn to Teesdale Transfer Pump Station in 2017-18 for \$0.35M, Bannockburn to Teesdale Transfer Main in 2028-29 for \$9.4M, Bakers Lane Tank Augmentation in >2029 for \$4.2M and Teesdale to Inverleigh Feeder Main in 2025-26 for \$5.9M.
<b>Central Highlands Water</b>						
Blackwood sewerage	Carried over	Deferred to next pricing period	2016-17	2017-18	On schedule	The Minister for Water launched the Blackwood Localised Septic Program (BLSP) in late 2015. The project is well progressed with approximately 35% of the faulty septic replaced, over 20 new dwelling planning reports actioned, community education materials and presentations on septic system maintenance has been delivered. The program is on-schedule to be completed in 2018 in accordance with its multi-agency approved project plan.
Raw water pipeline replacement	2014-15	2017-18	2015-16	2017-18	On schedule	Stage 1 of this project associated with Talbot raw water customers is complete. Stage 2, the replacement of prioritised sections of the Evansford raw water main is progressing with construction scheduled for completion in 2017-18.
Living Victoria/Living Ballarat — Ballarat West aquifer storage and recovery project	2013-14	2014-15	2013-14	2014-15	Completed on time	The aquifer recharge injection pilot and rooftop water quality collection program is complete. This is being used to inform options in the Ballarat City Integrated Water Management Plan.

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Project details



**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Central Highlands Water (continued)</b>						
Ballarat South flow containment project — Ballarat South outfall sewer	2016-17	2017-18	2016-17	2017-18	On schedule	Concept design works for the Ballarat South trunk sewer upgrade have been completed along with preliminary survey and geotechnical needs. Detailed design and approvals are scheduled for completion in 2017-18 to inform this major project during the next pricing period in accordance with the original program of works.
Ballarat South wastewater treatment plant augmentation works	2013-14	2017-18	2013-14	2017-18	On schedule	Major asset improvement works have been completed including a new large diameter clarifier, three digesters rehabilitated, electrical and aeration performance improvements delivered. A fourth digester and associated infrastructure is scheduled for rehabilitation during 2017-18 along with detailed designs to support major project delivery in the next pricing period.
Ballarat West urban growth zone	2013-14	2017-18	2013-14	2017-18	On schedule	The construction of Kennedy's Drive sewer pump station and flow containment facility is 75% complete and commissioning scheduled for completion by December 2017. Several planned water and sewer trunk pipeline projects have been completed with further projects scheduled for 2017-18 in accordance with Ballarat West subdivisional development needs.
Lexton water supply project	2013-14	2013-14	2013-14	2013-14	Completed on time	Works to deliver this water quality improvement upgrade were completed in mid-2014.
Maryborough water quality improvement project	2013-14	2017-18	2013-14	2017-18	Completed on time	Works to deliver this water quality improvement upgrade were completed in mid-2017.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Coliban Water</b>						
Rochester wastewater connection to Echuca	2013-14	2013-14	2013-14	2013-14	Completed on time	The project was completed as expected.
Harcourt rural modernisation project	2013-14	2014-15	2012-13	2016-17	Completed late	The project was completed in late 2016, as per the revised timelines. All customers now access their rural supply from the pressurised pipeline.
Heathcote backlog sewerage	2013-14	2014-15	2016-17	2018-19	Delayed	Implementation was initially delayed due to dynamic management of the capital portfolio prioritising higher priority works ahead of this project. The project will begin construction later this year.
Echuca and Cohuna water treatment plant upgrades	2014-15	2015-16	2016-17	2017-18	Delayed	Revised Corporation Cases were completed in November 2016. Work at Echuca WTP will be started later this year. A revised scope of works has been completed at Cohuna WTP; recent Tap Water Taste Testing has shown a good level of satisfaction with water quality in Cohuna, so future capital expenditure may be avoided.
Coliban main channel	2013-14	2016-17	2015-16	2017-18	Delayed	Works commenced in 2015-16 and are on track to be completed within 2017-18.
Cohuna water reclamation plant refurbishment	2016-17	2017-18	2016-17	2016-17	Completed on time	The works have been completed.
Bridgewater and Laanecoorie water treatment plant upgrades	2014-15	2017-18	2014-15	2016-17	Completed on time	The project was completed with a modified scope and reduced cost.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>East Gippsland Water</b>						
Sarsfield — additional tank or liner	2013-14	2014-15	2017-18	2019-20	Deferred	This project was originally scheduled for construction in 2014-15. Further analysis of the Mitchell River Water Supply Demand Strategy allowed the project to be deferred. Design will commence 2017-18.
Bairnsdale sewer master plan bridge sewer pump station	2013-14	2015-16	2013-14	2015-16	Completed on time	Construction of three kilometres of dedicated rising main from Bridge SPS to Bairnsdale WWTP has been completed. Further works on the pump station and connections have also been completed.
Paynesville main supply pipeline (stage 2)	2014-15	2015-16	2017-18	2025-26	Deferred	Analysis of the Mitchell River Water Supply Demand Strategy and risk assessment also deferred this project until the next pricing period. Design for stages 2 and 3 will commence 2017-18, construction works will be staged over the next two pricing periods.
Bairnsdale wastewater treatment plant upgrade	2014-15	2017-18	2014-15	2017-18	On schedule	Digester refurbishment was largely completed in 2015-16 and commissioning is to be finalised by the end of the 2016 calendar year. Subsequent stages of this project (including flow balancing, electrical upgrades, and digestate dewatering system) have commenced and are on schedule for completion by the end of the current pricing period.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Gippsland Water</b>						
Drouin wastewater treatment plant upgrade	Carried over	2015-16	2015-16	2015-16	Completed on time	Practical Completion on the construction contract was issued in April 2016 and the grit removal and screens have been operating since that time removing inert solids and grit hence improving the treatment capacity of the Drouin WWTP lagoons.
Sale water treatment plant upgrade	2013-14	2014-15	2014-15	2015-16	Completed late	Project involved replacing ageing aeration towers and non-compliant chemical storage delivery and handling facilities (part 1 of a plant upgrade) to improve water quality. Contract signed January 2015. Project achieved practical completion in December 2015, with demolition works completed March 2016.
Warragul-Hazel Creek trunk sewer (stage three)	2013-14	2014-15	2013-14	2014-15	Completed on time	Construction works began in September 2014 to make way for gas relocations. The project was completed in June 2015.
Loch Sport sewerage scheme	2013-14	2016-17	2012-13	2015-16	Completed on time	The Loch Sport township was declared fully serviceable in line with Gippsland Water's commitment to the community in October 2015 and has been operating without incident from that date. The community were a key stakeholder in the successful delivery of the project both individually and through the Loch Sport Community reference group.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Goulburn Valley Water</b>						
Cobram — MGC unfluoridated water pipeline	2013-14	2014-15	2013-14	2017-18	Delayed	The majority of expenditure associated with this project will be funded by parties external to Goulburn Valley Water. The project was delayed until funding commitment was provided. Construction of the pipeline was completed in May 2017 with remaining items to be completed in August 2017.
Kilmore wastewater management facility additional winter storage	2014-15	2015-16	2023-24	2025-26	Deferred	Planning and design stages are substantially completed for a base project option. An alternative innovative option was identified, which involves environmental offsets rather than constructing infrastructure. Implementing the base project option has been deferred until a later date; with offset projects commencing in 2016-17.
Mansfield wastewater management facility additional winter storage	2014-15	2015-16	2023-24	2025-26	Deferred	Planning and design stages are substantially completed for a base project option. The base case requires significant land acquisition. An alternative innovative option was identified, which involves environmental offsets rather than constructing infrastructure. Implementing the base project option has been deferred until a later date; with offset projects commencing in 2016-17.
Marysville new water treatment plant	2013-14	2015-16	2013-14	2014-15	Completed on time	This project was completed in June 2015.
Numurkah water treatment plant upgrade	2013-14	2015-16	2013-14	2015-16	Completed on time	This project reached practical completion in 2015-16.
Shepparton water treatment plant upgrade	2014-15	2017-18	2017-18	2019-20	Deferred	The water treatment plant capacity upgrade works were deferred following the successful implementation of plant optimisation works. Water quality improvement works are still required, but were deferred to commence in 2017-18.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>GMMWater</b>						
Intelligent rural pipeline networks	2013-14	2013-14	2013-14	2015-16	Completed late	This project was completed in June 2016, which was later than scheduled because project planning, the tendering process and finalising funding agreements delayed the commencement of the project.
Irrigation network decommissioning	2013-14	2014-15	2013-14	2014-15	Completed on time	This project was delivered and completed as scheduled.
Rupanyup sewerage scheme	2013-14	2014-15	2014-15	2014-15	Completed on time	This project was completed in October 2014 and the scheme was declared operational on 1 July 2015.
Upgrade of Donald wastewater and reuse system	2015-16	2015-16	2017-18	2019-20	Deferred	This project scope is being reviewed to investigate the impact of works to reduce infiltration. Wastewater treatment plant upgrade deferred to the next pricing period.
Donald treated water supply	2013-14	2014-15	2013-14	2013-14	Completed on time	Treated water supply to Donald was available from June 2014.
Wycheproof treated water supply	2013-14	2013-14	2013-14	2013-14	Completed on time	Treated water supply to Wycheproof was available from June 2014.
Rupanyup treated water supply	2013-14	2014-15	2013-14	2013-14	Completed on time	Treated water supply to Rupanyup was available from June 2014.
Minyip treated water supply	2013-14	2013-14	2013-14	2013-14	Completed on time	Treated water supply to Minyip was available from June 2014.
Wimmera Mallee Pipeline Augmentation ***NEW PROJECT***	2013-14	2017-18	2013-14	2015-16	Completed on time	Remaining funded projects related to the Wimmera Mallee Pipeline Project were completed in 2015-16. The final Commonwealth and State funding acquittal for the project was completed in 2016-17.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Lower Murray Water</b>						
Mildura Trunk Extension	Carried over	2014-15	2014-15	2015-16	Completed late	The Mildura water supply 14 <sup>th</sup> Street trunk main extension project was deferred because demand was lower than planned. It has now been completed in three stages : <ul style="list-style-type: none"> <li>• Stage 1: completed in 2015.</li> <li>• Stage 2 &amp; 3: completed June 2016.</li> </ul>
Relocation of 14 <sup>th</sup> Street tower	Carried over	2018-19	2017-18	2018-19	Deferred	This project was deferred during the 2008–13 pricing period because demand was lower than planned. The project is to prepare for future requirements in the relocation of this tank, with works now scheduled into the fifth regulatory pricing period
Mildura water supply strategy	2015-16	2015-16	2015-16	2015-16	Completed on time	This project involved two major stages. Stage 1 (Riverside Avenue) and Stage 2 (Benetook and Cureton Avenues). Project completed July 2016.
Red Cliffs WTP upgrade	2013-14	2014-15	2013-14	2014-15	Completed on time	This project was completed on schedule in December 2014.
WTP water quality improvements	2013-14	2016-17	2011-12	2017-18	Delayed	This is a program of works across several water treatment plants, which began in 2011-12 and will be undertaken progressively over the 2013–18 pricing period. Robinvale WTP was completed in 2011-12. Mildura 7 <sup>th</sup> Street WTP was completed in June 2015. Swan Hill WTP works have commenced and will be completed in November 2016. Finally, Kerang WTP works will be undertaken in 2017-18.
WTP PLC replacement	2013-14	2016-17	2011-12	2017-18	Delayed	This is a program of works to be conducted in parallel with the WTP water quality improvements project, following the same timeline as described above and will be completed in 2017-2018.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Lower Murray Water (continued)</b>						
Mildura emergency sewer overflow storages	2012-13	2013-14	2012-13	2013-14	Completed on time	Project works were completed on schedule in March 2014.
Merbein sewage diversion to Koorlong WWTP	2016-17	2017-18	2023-24	2027-28	Deferred	A revised Wastewater Management Plan has identified the operational need to proceed with this project, and it has now been deferred into the fourth regulatory pricing period (PS4).
<b>North East Water</b>						
Bright off-river storage	2013-14	2013-14	2010-11	2014-15	Completed late	This project was put on hold in January 2011, following the Minister's request for a review of the site selection process. North East Water issued a report in February 2011 and the Minister decided in late September 2011 to allow the project to progress through to the planning stage. Transfer main and off-stream storage projects were awarded in June 2013 and September 2013 respectively. The transfer main was completed early 2014 and the storage dam in November 2014 after experiencing wet weather construction delays.
Servicing unserviced communities (small towns) — Moyhu sewerage system	2013-14	2014-15	2013-14	2016-17	Completed late	This is an innovative STED (septic tank effluent drainage system) treatment and reuse project. This project was completed in June 2017.

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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
<b>North East Water (continued)</b>						
Yackandandah reclaimed water management	2013-14	2016-17	2018-19	2019-20	Deferred	This project was deferred to the next pricing period. An ecological risk assessment (ERA) process is to be completed for discharges from the site to determine the potential impact of the receiving environment and beneficial uses, to inform whether a longer term discharge option is more viable than the current option.
Bright water treatment plant	2013-14	2017-18	2013-14	2016-17	Completed on time	This project was completed in November 2016.
Wangaratta wastewater treatment stage 1 upgrade	2014-15	2017-18	2014-15	2017-18	On schedule	This project is currently out to market with the contract to be awarded by October 2017.
Beechworth clearwater storage tank ***NEW PROJECT ***	Beyond 2017-18	Beyond 2017-18	2014-15	2017-18	On schedule	This project is required to ensure the township of Beechworth has sufficient storage of safe drinking water to meet peak daily demand. The project was reprioritised, bringing it forward to the current pricing period. Design is being finalised with procurement to start in Oct. Anticipated completion in June 2018.
Goorambat Security of Supply ***NEW PROJECT***	2017-18	2018-19	2016-17	2017-18	On schedule	This project addresses safe drinking water for the township of Goorambat. Project is in detailed design phase with estimated completion in early 2017-18.
<b>South Gippsland Water</b>						
Leongatha wastewater treatment plant — refurbish decommissioned digestive system	2013-14	2013-14	2013-14	2014-15	Completed late	The project was commissioned in September 2014.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>South Gippsland Water (continued)</b>						
Poowong/Loch/Nyora sewerage scheme	2013-14	2017-18	2014-15	2015-16	Completed on time	This project was completed in June 2016 in collaboration with South East Water.
Foster wastewater treatment plant —rising main pipeline and storage	2017-18	2017-18	2023-24	2023-24	Deferred	A reuse scheme and a minor treatment plant upgrade is now planned for 2017-18 to 2018-19. This work has allowed the original project to be deferred to 2023-24.
Northern towns supply connection works — Lance Creek to Korumburra	2015-16	2017-18	2016-17	2018-19	Delayed	This project received funding in the 2016-17 State Budget and construction contracts are now in place with completion expected before June 2019.
Northern towns supply connection works — Korumburra to Poowong	2016-17	2017-18	2016-17	2018-19	Delayed	This project received funding in the 2016-17 State Budget and construction contracts are now in place with completion expected before June 2019.
<b>Wannon Water</b>						
Curdie Vale bore construction	2013-14	2013-14	2013-14	2014-15	Completed on time	The project was completed in 2015.
Construct new bore at Wyatt St Portland	2014-15	2014-15	2014-15	2016-17	Completed on time	Bore was completed in 2016-17 financial year.
Casterton water treatment plant clarifier	2014-15	2015-16	2014-15	2016-17	Completed on time	Clarifier was completed in 2016-17 financial year.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Wannon Water (continued)</b>						
Water tower and pump station in Wollaston Road Warrnambool	2014-15	2015-16	2016-17	2018-19	Deferred	This project was deferred for three years because demand growth has softened. A temporary water supply was implemented, which satisfies the short term requirements within this development.
Water tower and pump station in Wangoom Road Warrnambool	2014-15	2016-17	2016-17	2018-19	Deferred	This project was deferred for two years because demand growth has softened.
Heywood and Hamilton water reclamation plant irrigation works	2015-16	2016-17	2013-14	2017-18	Completed on time	Works at Heywood are now complete, with additional infrastructure constructed at the treatment plant in 2015-16, and an amended discharge license to the adjacent watercourse now in place. Investigations into lower cost options at Hamilton have determined that additional works are not required. This has prevented the need for significant expenditure of additional winter storages.
Cobden and Casterton water reclamation plant irrigation works	2014-15	2017-18	2014-15	2017-18	On schedule	An amended discharge license has been received for Cobden WRP, and no further works are required. Investigations relating to the Casterton WRP license conditions continue, which would prevent the need for significant expenditure of additional winter storages.
Portland reclamation plant wind energy project ***NEW PROJECT***	2014-15	2015-16	2014-15	2017-18	Delayed	This is a new major project (not initially included in the pricing submission). It is expected to deliver a significant reduction in energy costs at the site. Currently power connection and contractual terms associated with the purchase of the wind turbine continue to be negotiated. There should be some significant progress on these issues in 2017-18, to allow turbine to be ordered and ancillary works on site to commence construction.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Western Water</b>						
Rockbank outfall sewer (rising main)	2013-14	2014-15	2013-14	2017-18	Deferred	Completion of design and subsequent construction was initially deferred due to Fair Water Bills and slower growth. The recent substantial growth in Rockbank has required the delivery of this project. Construction is currently nearing completion.
Surbiton Park RWP upgrade (digester)	2013-14	2014-15	2013-14	2017-18	Deferred	Progression to tender and construction was deferred due to Fair Water Bills and slower growth. Contract awarded in September 2016. Construction works are progressing.
Melton Class A RWP upgrade	2015-16	2016-17	2018-19	Not required	Cancelled	The project was deferred to the next regulatory pricing period due to Fair Water Bills and slower growth. The extent of the uptake of Class A water in new developments will determine the need for this investment.
Sunbury additional water storage — Bald Hill tank	2013-14	2016-17	2013-14	2018-19	Deferred	Land acquisition and construction was deferred due to Fair Water Bills and slower growth. The owner of the preferred site has unrealistic price expectations which could not be negotiated. Currently commencing a compulsory acquisition process for the site.
Sunbury recycled water plant (RWP) upgrade	2013-14	2016-17	2013-14	2018-19	Delayed	This project was delayed in the planning phase, firstly due to a longer than expected time to obtain corporation case approval from Treasury and then an additional delay when awarding the contract in late 2015, as a result of the change in Board members. The Design, Build, Operate Contract has been awarded with programmed completion of construction moved from late in 2016-17 to October 2018.
Bacchus Marsh RWP winter storage lagoon	2016-17	2017-18	2016-17	Not required.	Cancelled	Progression of related projects and recent planning work has determined that this investment is not required in the next 10 years.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Western Water (continued)</b>						
Bacchus Marsh rising main	2017-18	2017-18	2010-11	2020-21	Deferred	This project is to provide some redundancy and capacity increase of a critical asset. In 2013-14, the project was deferred to the next pricing period because other projects reduced the catchment and testing found the main was in better condition than expected.
Bacchus Marsh sewer rising main Geelong Road	2016-17	2017-18	2012-13	2018-19	Delayed	Detailed design is almost complete. Final approvals are awaited. Expect to start construction in early 2018.
<b>Westernport Water</b>						
Candowie upgrade project	2013-14	2013-14	2013-14	2013-14	Completed on time	The project was completed in July 2013. The reservoir capacity is now doubled to 4463 megalitres.
Cowes wastewater reticulation — upgrade pump stations	2014-15	2014-15	2014-15	2015-16	Completed late	This project comprises two sewer pump station upgrades. The Church Street sewer pump station upgrade was completed in 2014-15. The Chapel Street sewer pump station upgrade was completed in 2015-16.

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Project details

**Table 2 Summary (continued)**

Project description	Scheduled start date	Scheduled completion date	Expected/actual start date	Expected/actual completion date	Status	Water corporation comments
<b>Westernport Water (continued)</b>						
Ian Bartlett water purification plant tertiary treatment	2015-16	2015-16	2015-16	2017-18	Delayed	The tertiary treatment upgrade concept design was completed in 2014-15. Further investigations into optimising the existing plant to achieve treatment targets was completed in 2015-16. The preferred upgrade option, design and construction of UV treatment facility, has commenced in 2016-17. The construction phase is expected to be completed by December 2017.
Cowes wastewater reticulation — new rising mains	2016-17	2017-18	2016-17	2017-18	On schedule	This project comprises of two rising main upgrades. The implementation schedule for the rising main from Church Street and Chapel Street sewer pump station has been reviewed in 2015-16 and determined that the Chapel Street rising main could be deferred until Prising Submission 2 (PS2). The construction phase of Church Street rising main has been contracted and is expected to be completed by December 2017.
San Remo basin cover replacement	2016-17	2017-18	2020-21	2022-23	Deferred	San Remo Basin liner and cover replacement was initially programmed in 2016-17 due to its end of manufacturer's Warranty Period. However after completing an engineering investigation and condition assessment the storage upgrade has now been rescheduled in the next regulatory period.
Cowes wastewater treatment plant upgrade	2013-14	2017-18	2013-14	2015-16	Completed on time	This project commenced late 2013-14 and the construction phase is now complete. Testing and commissioning of the new works was completed in 2015-16. The post implementation review highlights the Stage 1 of the Cowes WWTP upgrade has proved a success with the plant achieving process stability and has a greater capacity to handle wet weather. The plant has met all EPA licence limits and achieved increased nitrogen removal (approximately 75% removal).

Project details

