

Boundary Creek, Big Swamp and Surrounding Environment – Remediation and Environmental Protection Plan

Quarterly Update

1 October to 31 December 2023

12 January 2023

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Introduction

In June 2017, Barwon Water acknowledged that the historic management of periodic groundwater pumping activities at the Barwon Downs borefield, that were conducted between 1982 and 2016 to supplement drinking water supplies during dry periods, had led to a reduction in groundwater contribution from the Lower Tertiary Aquifer into select reaches of Boundary Creek, a tributary of the Barwon River.

This reduction, in conjunction with the changes in land use, Millennium Drought, and the complexities associated with management and regulation of a private on-stream dam that controls flow into the lower reaches of Boundary Creek, resulted in the occurrence of cease to flow events in Boundary Creek and the increased severity of wet-dry cycling processes within Big Swamp – a wetland that is primarily fed by inflows from Boundary Creek.

This occurred, despite meeting the provisions set out in the groundwater extraction licence(s) that were intended to offset the potential impacts from Barwon Water's groundwater pumping activities on Boundary Creek. This drying subsequently resulted in the enhanced oxidation of naturally occurring acid sulfate soils and discharge of acidity and metals impacting the condition and function of Big Swamp and the lower reaches of Boundary Creek.

In May 2018, Barwon Water established a community and stakeholder working group to help inform the development of a Remediation Plan to address the impacts caused by Barwon Water's activities. In September 2018, Barwon Water's commitment to undertake remedial works was legally strengthened through the issuing of a Ministerial Notice by Southern Rural Water (SRW) under section 78 of the Water Act. The Boundary Creek, Big Swamp and Surrounding Environment Remediation and Environmental Protection Plan (REPP) was subsequently submitted to Southern Rural Water (SRW) in December 2019, and subsequently amended to account for Southern Rural Water and Independent Technical Reference Panel (ITRP) feedback prior to acceptance in February 2020. Noting that this was more recently updated in July 2023.

A key requirement of the section 78 notice and the REPP is the provision of quarterly updates to Southern Rural Water to report on progress with implementation of the plan, as well as an Annual Report. The section 78 notice also stipulates that the Annual Report is required to be submitted to Southern Rural Water for review and comment before being made publicly available by 30 September each year.

This quarterly update is the fifteenth (15th) since the REPP was implemented on 1 March 2020, and provides a high-level update on progress against the actions and timeframes outlined in the REPP between 1 October and 31 December 2023.

Implementation of the REPP

In accordance with the REPP, Barwon Water have adopted an adaptive management approach, whereby the REPP can be adapted in response to the current 'state of knowledge', or in response to data collected as part of the routine environmental monitoring program. This approach allows Barwon Water and Southern Rural Water to evaluate how the confirmed areas of impact and the surrounding environment more broadly are responding to the adopted remediation actions and take further action, such as implementation of contingency measures, if required.

To help address the requirements of the section 78 notice and ensure momentum was maintained, several key milestones and actions were established, as shown in Figure 1. While the timeframes presented only extend until the end of 2024, Barwon Water acknowledges that it may take several years to meet all of the Boundary Creek and Big Swamp remediation success targets, and that the number and nature of remedial actions or contingency measures may change in line with the adaptive management approach.

This acknowledges that the number and nature of remedial actions needs to be balanced with practicality, as is required under the section 78 notice, along with the environmental implications, costs, risks, and trade-offs associated with implementing remedial actions that may alter the condition or intrinsic value of the swamp.

Regular assessment of monitoring results against the success targets and triggers for the implementation of contingency measures will continue beyond the timeframes outlined in Figure 1 until successful remediation has been achieved.

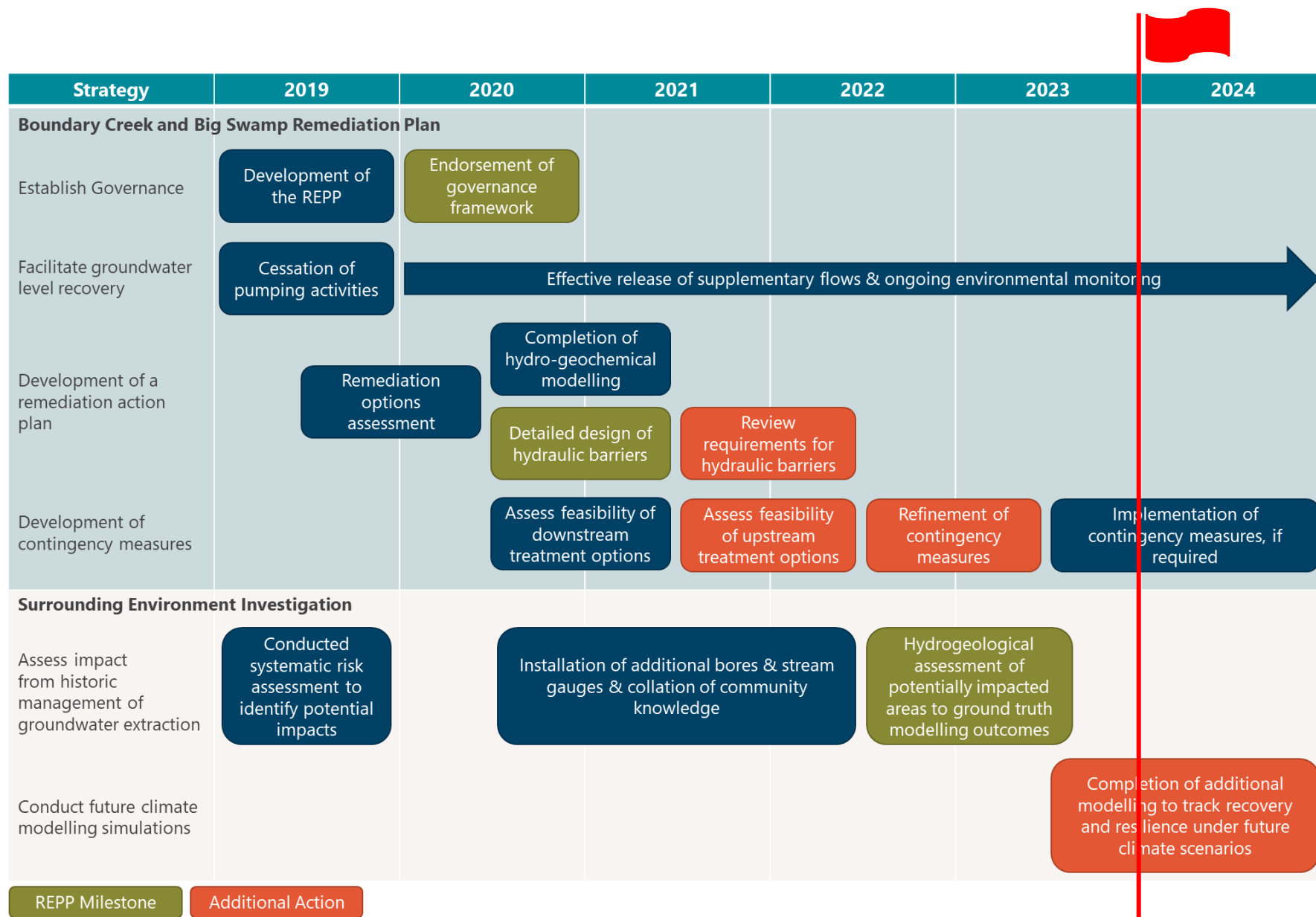


Figure 1: Timeframes for implementation of the REPP

Boundary Creek and Big Swamp Remediation Plan

Boundary Creek and Big Swamp status update

Based on the most recent data collected as part of Barwon Water's routine environmental monitoring program, the following observations can be made:

- Groundwater levels within Big Swamp's upper aquifer system continue to be maintained above the reactive horizon (i.e., where there is a high potential acidity) (refer Figure 2 and Figure 3). This positive outcome continues to minimise any further oxidation of acid sulfate soils and reduce the severity of wet-dry cycling processes.
- Groundwater levels from bores installed in the Lower Tertiary Aquifer system within Big Swamp continue to indicate the long-term recovery and repressurisation of the Lower Tertiary Aquifer system (refer Figure 2 and Figure 3). This is a positive shift towards the restoration of groundwater-surface water interaction in Boundary Creek upstream of Big Swamp.
- The monthly rainfall deficits observed between July and December 2023 have resulted in increased drying in the eastern and western portions of the swamp (refer Figure 2 and Figure 3) when compared to those recorded in December 2022 following a wetter than average period. Despite this, the moisture content within the swamp remains higher than worst case conditions.
- Despite the reduction in standing water visible within Big Swamp during November 2023 (refer Table 1), continued vegetation growth and recolonisation is evident when compared to October 2022 and February 2023. This indicates that suitable conditions for desired species have continued to be maintained through the drier periods that were experienced between July and December 2023.
- The pH levels in Boundary Creek downstream of Big Swamp (site 233276) and Boundary Creek at Yeodene (site 233228) continue to exhibit a long-term increasing trend with no severe acid flush events occurring since 2016. A minor acid flush event was experienced in December 2023 however, during this time acidity levels remained within the historic range (refer Figure 4 and Figure 5). It is also noted that the pH and acidity levels within the Barwon River were not impacted during this time.
- No cease to flow events have occurred along Reach 3 of Boundary Creek since February 2020.

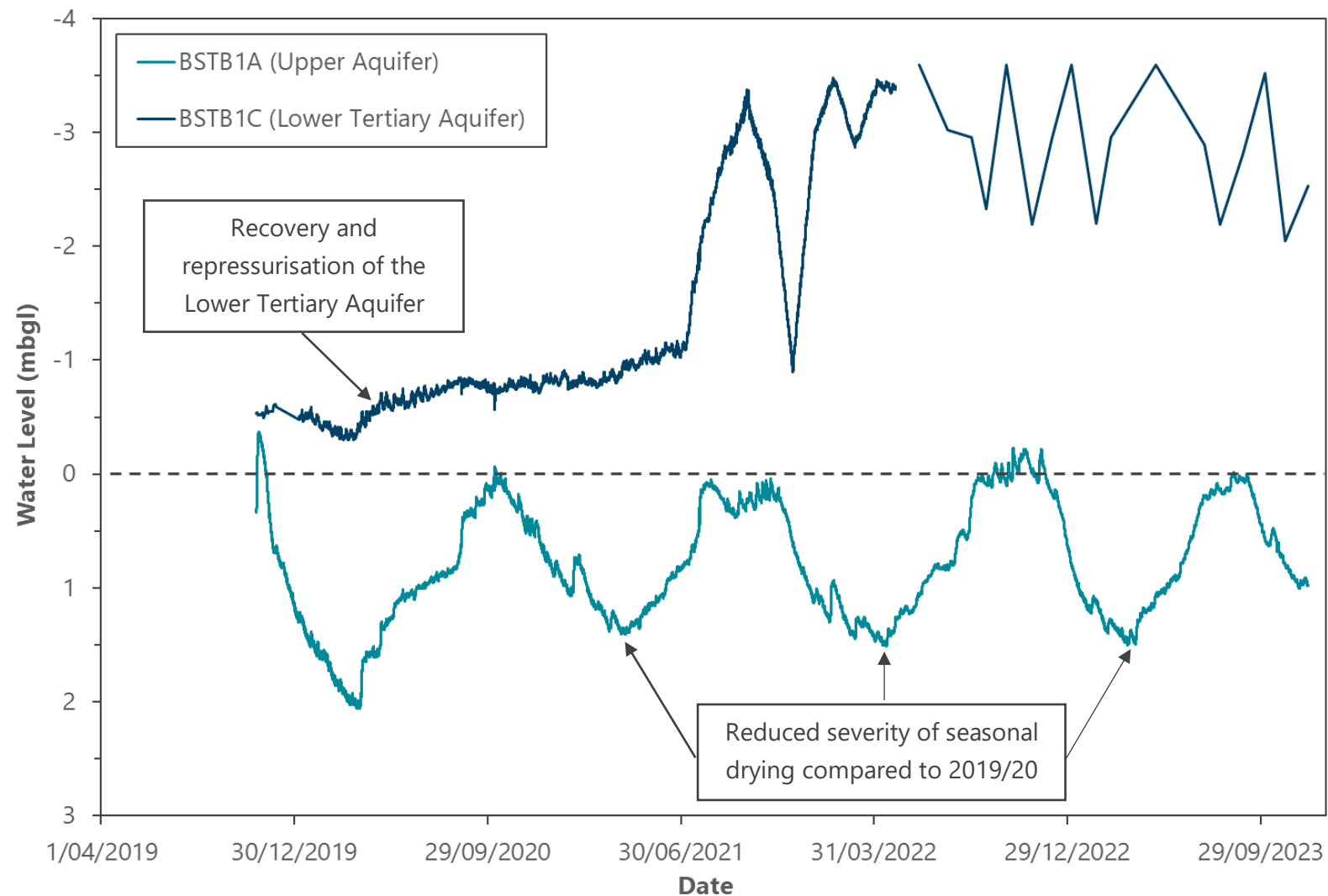


Figure 2 Groundwater levels in the eastern portion of the swamp. Note that the logger was removed from BSTB1C in April 2022 due to leakage associated with repressurisation of the LTA, the data presented after this time relates to spot sampling data

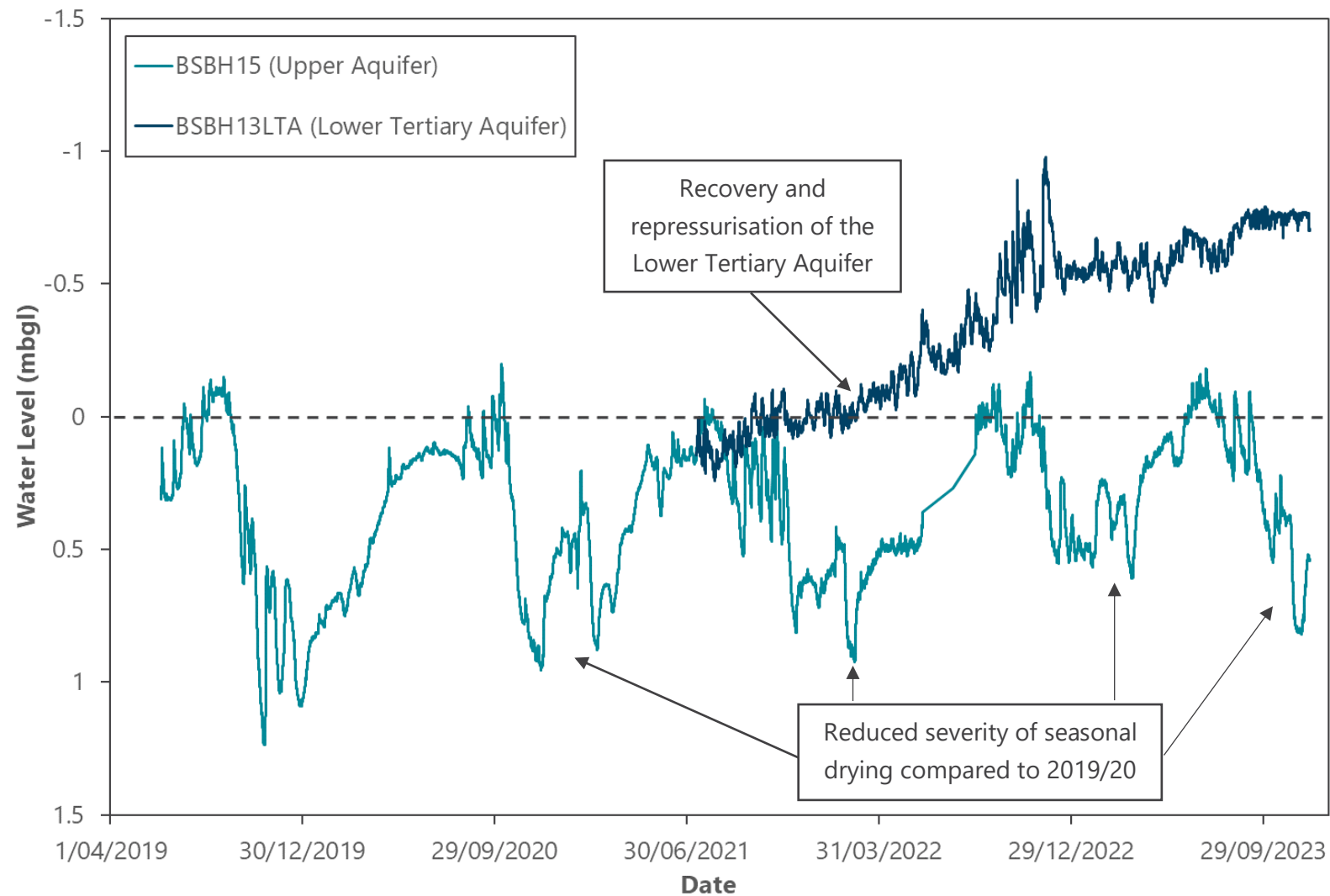


Figure 3 Groundwater levels in the western portion of the swamp. Note that the logger from BSBH15 was found to be missing on 14 July 2022 and was replaced on 15 August 2022, data between these times relates to spot sampling data

Table 1 Visual comparison of Big Swamp since October 2022

Date	Western end of Big Swamp	Eastern end of Big Swamp
October 2022		
February 2023		
September 2023		
November 2023		

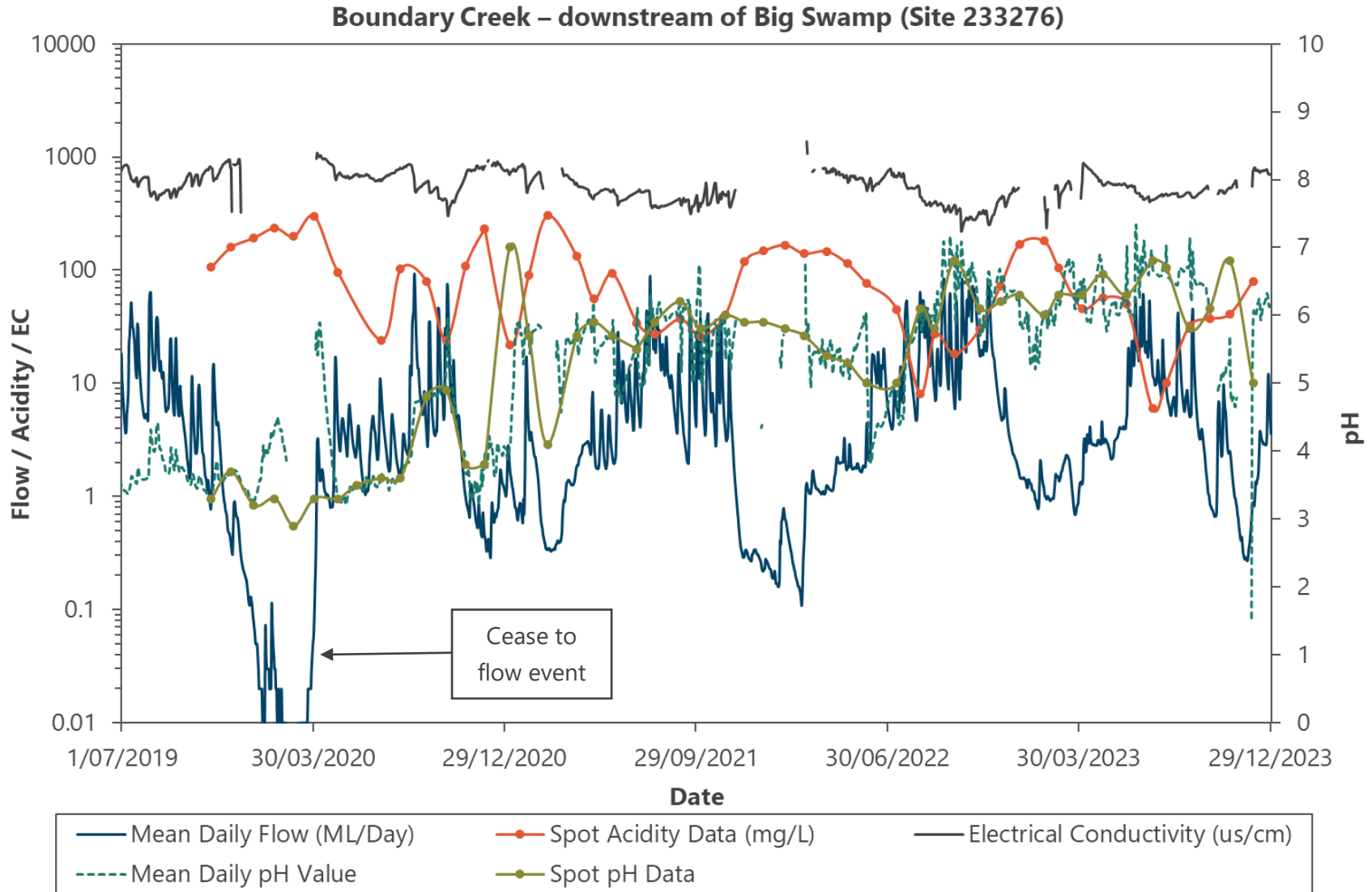


Figure 4 Streamflow, pH, EC and acidity readings in Boundary Creek – downstream of Big Swamp as recorded at stream gauge 233276 and during routine spot sampling

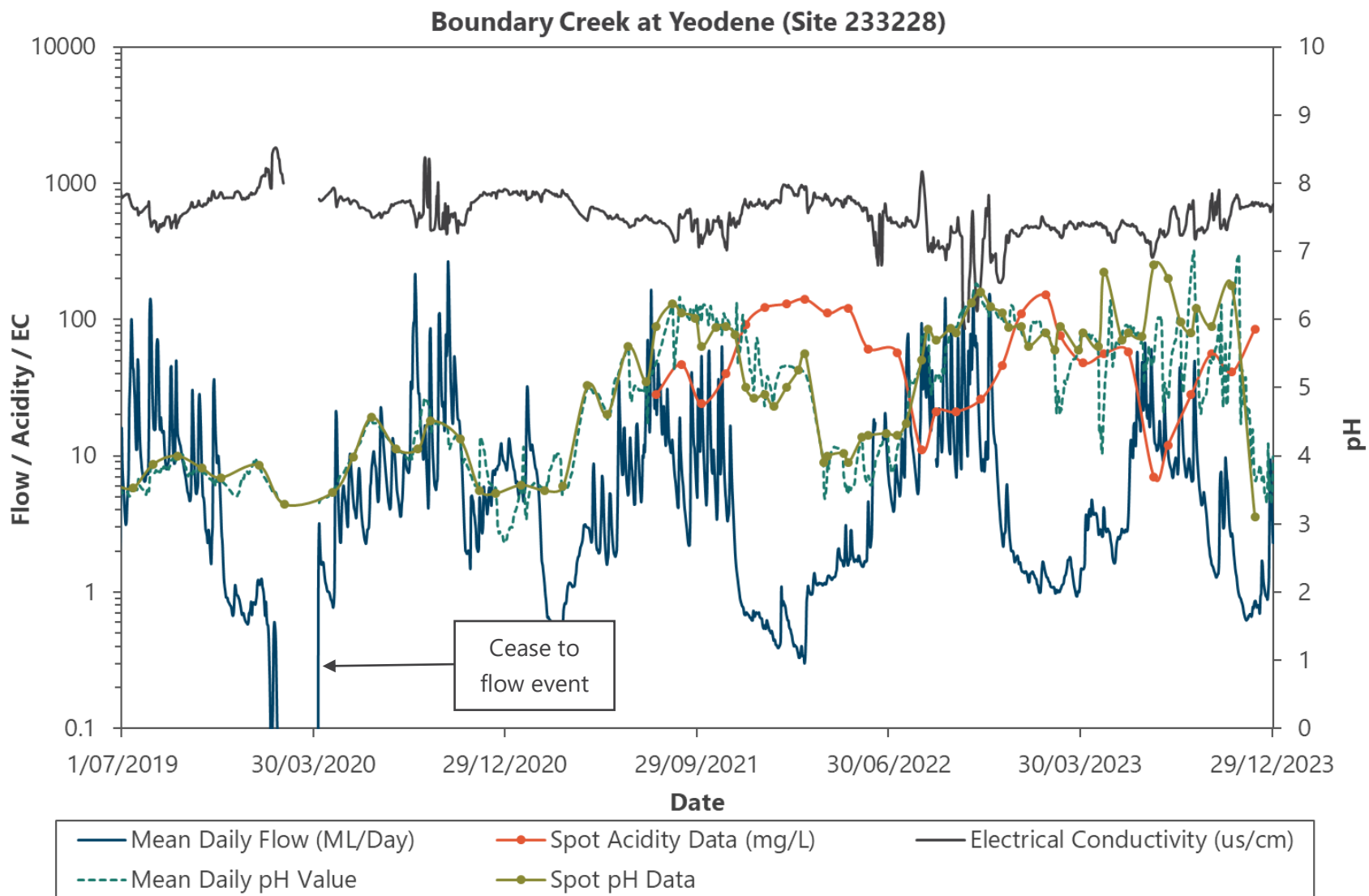


Figure 5 Streamflow, pH and acidity readings in Boundary Creek at Yeodene as recorded at stream gauge 233228 and during routine spot sampling

Actions completed on the Boundary Creek and Big Swamp Remediation Plan since 30 September 2023

Table 2 outlines the actions undertaken for the Boundary Creek and Big Swamp Remediation Plan since 30 September 2023.

Table 2 Boundary Creek and Big Swamp - Actions completed in Q2 2023/24 (1 October – 31 December 2023)

Action Items	Comment / Link
Completion of the Q2 2023/2024 Remediation Reference Group meeting	Completed 15 November 2023
Submit quarterly update to Southern Rural Water for the period 1 October to 31 December 2023 and publish to the Your Say web page	Complete – this report Refer to the Your Say website located here: https://www.yoursay.barwonwater.vic.gov.au/boundary-creek
Continue to collect data from new and existing monitoring assets	Ongoing
Provision of supplementary flows, where required, to maintain flows of at least 0.2 ML/day at the Boundary Creek at Yeodene stream gauge (site 233228).	Ongoing Barwon Water also continues to monitor the operation of the automated flow release valve that was installed on the outlet of the private on-stream dam to help facilitate the passing of flows down Boundary Creek.
Finalise and publish the spring macro-invertebrate and water quality sampling report.	Complete – this report Refer to the Your Say website located here: https://www.yoursay.barwonwater.vic.gov.au/boundary-creek
Progress amendment of the REPP based on the current 'state of knowledge' and the adaptive management approach. This will include a review of the adopted remedial actions and the development of a risk-based remedial strategy that accounts for recent community and stakeholder feedback to help facilitate natural recovery processes.	Complete, the revised REPP was submitted to Southern Rural Water on 31 July 2023. Barwon Water is currently awaiting feedback on this from Southern Rural Water.
Development of contingency measures	Barwon Water's risk-based contingency approach and design of a mobile downstream treatment contingency measure was submitted to Southern Rural Water as part of the revised REPP (refer above). Barwon Water is currently awaiting feedback on this from Southern Rural Water.

Action Items	Comment / Link
Completion of a Level 3 Ecological Risk Assessment to quantify the risks of the existing metal and acidity loads on Boundary Creek, Big Swamp, and the Barwon River and to help inform the development of suitable triggers for the implementation of relevant contingency measures, if required	Submitted to Southern Rural Water on 31 July 2023 and uploaded to the Your Say website. Refer to the Your Say website located here: https://www.yoursay.barwonwater.vic.gov.au/boundary-creek Noting that some minor updates to this report are to be conducted following receipt of Southern Rural Water's feedback on the July 2023 submissions.
Completion of a paleoecology study of Big Swamp	Submitted to Southern Rural Water on 31 July 2023 and uploaded to the Your Say website. Refer to the Your Say website located here: https://www.yoursay.barwonwater.vic.gov.au/boundary-creek
Engage a suitably qualified driller to conduct the Barwon Downs borefield decommissioning works	In progress, a suitably qualified contractor is expected to be appointed by 30 June 2024.

Upcoming actions associated with the Boundary Creek and Big Swamp Remediation Plan

Table 3 outlines the upcoming actions associated with the Boundary Creek and Big Swamp Remediation Plan between 1 January and 31 March 2024.

Table 3 Boundary Creek and Big Swamp - Upcoming actions for Q3 2023/2024 (1 January – 31 March 2024)

Action Items	Due
Completion of the next routine Remediation Reference Group meeting	March 2024
Submit quarterly update to Southern Rural Water for the period 1 January to 31 March 2024 and publish to the Your Say web page	14 April 2024
Continue to collect data from new and existing monitoring assets	Ongoing
Continue to release supplementary flows, where required, to try to maintain a flow of at least 0.2 ML/day at the Yeodene stream gauge #233228	Ongoing

Surrounding Environment Investigation

Surrounding Environment Investigation status update

In line with the REPP, the outcomes of the surrounding environment investigation were submitted to Southern Rural Water on 31 July 2023, as detailed in Figure 1 and Figure 6.

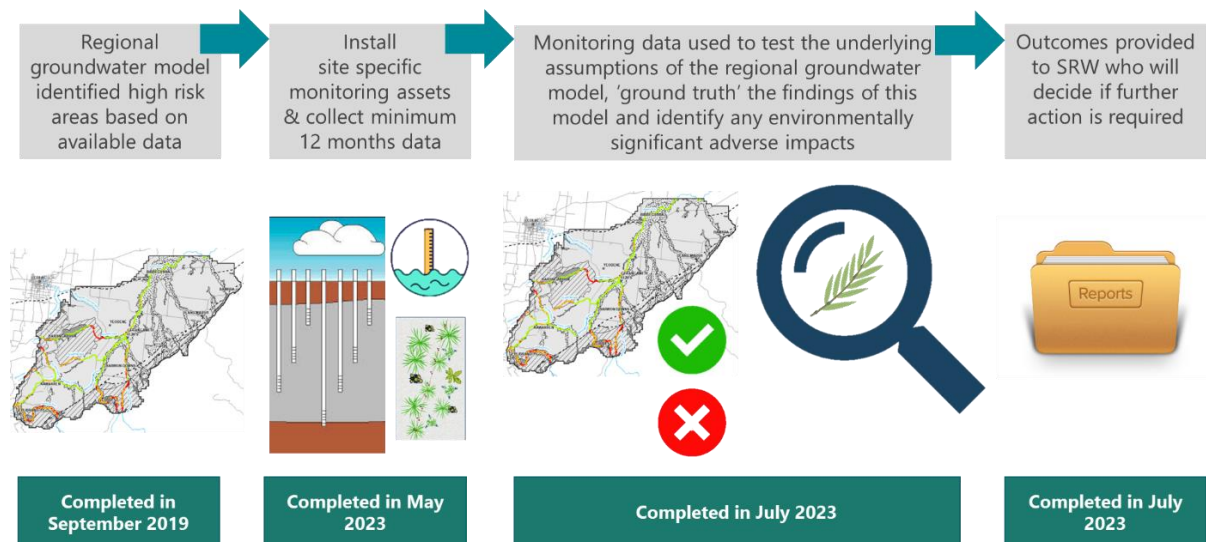


Figure 6 Process overview for the surrounding environment investigation

While the surrounding environment investigation identified hydraulic influences from Barwon Water's historic management of groundwater pumping activities at the Barwon Downs borefield in Love Creek, Yahoo Creek and to a lesser extent in the Barwon River and Gellibrand River, a multiple lines of evidence approach indicated that this has not resulted in any environmentally significant impacts (i.e., material harm) within the broader environment.

Barwon Water is currently awaiting feedback on the surrounding environment investigation from Southern Rural Water. However, the remedial actions that have been committed to as part of the Boundary Creek and Big Swamp Remediation Plan will continue to facilitate the recovery of the Lower Tertiary Aquifer within the surrounding environment and help to address any identified groundwater pumping derived hydraulic influences.

Actions Completed on the Surrounding Environment Investigation since 30 September 2023

Table 4 outlines the actions completed for the Surrounding Environment Investigation since 30 September 2023.

Table 4 Surrounding Environment Investigation - Actions completed in Q2 2023/24 (1 October – 31 December 2023)

Action Items	Comment / Link
Completion of the Q2 2023/2024 Remediation Reference Group meeting	Completed 15 November 2023
Submit quarterly update to Southern Rural Water for the period 1 October to 31 December 2023 and publish to the Your Say web page	Complete – this report Refer to the Your Say website located here: https://www.yoursay.barwonwater.vic.gov.au/boundary-creek
Continue collection of data from new monitoring assets for the surrounding environment investigation	Ongoing
Continue collation of community information regarding sites/issues of concern to inform the surrounding environment investigation	Ongoing
Progress amendment of the REPP based on the current 'state of knowledge' and the adaptive management approach. This will include a review of the adopted remedial actions and the development of a risk-based remedial strategy that accounts for recent community and stakeholder feedback to help facilitate natural recovery processes.	Complete, the revised REPP was submitted to Southern Rural Water on 31 July 2023. Barwon Water is currently awaiting feedback on this from Southern Rural Water.
Scope any further works required as part of the surrounding environment investigation	A scope has been developed and Barwon Water are currently engaging with The Upper Barwon Landcare Network to identify potential sampling locations and contacts. Barwon Water is currently awaiting feedback from Southern Rural Water on our 31 July 2023 submissions before finalising the scope of any further works.
Engage a suitably qualified consultant/contractor to conduct the future climate resilience modelling work	Complete, this project commenced on 27 November 2023
Completion of fish surveys in the Upper Barwon Region	Planning underway. First event to occur in 2024 with a follow up event scheduled for 2025

Upcoming actions associated with the Surrounding Environment Investigation

Table 5 outlines the upcoming actions associated with the Surrounding Environment Investigation between 1 January and 31 March 2024.

Table 5 Surrounding Environment Investigation - Upcoming actions for Q3 2023/2024 (1 January – 31 March 2024)

Action Items	Due
Completion of the next routine Remediation Reference Group meeting	March 2024
Submit quarterly update to Southern Rural Water for the period 1 October to 31 December 2023 and publish to the Your Say web page	14 April 2024
Continue collection of data from new monitoring assets to track recovery	Ongoing
Completion of further investigations into Deans Marsh, Matthews and Pennyroyal Creeks	Barwon Water is currently awaiting feedback from Southern Rural Water on our 31 July 2023 submissions before finalising the scope of these further investigations. At this stage these works are due to be completed by 31 December 2024.
Completion of climate resilience modelling of waterways influenced by former groundwater pumping activities at the Barwon Downs borefield	Due 31 December 2024

Issues Register

Table 6 below outlines any issues that have been identified during implementation of the REPP that may impact future implementation activities.

Table 6 Issues register

Issue	Likelihood	Consequence	Comments
Availability of appropriate consultants or contractors to undertake works required under the REPP	Medium	Low	Barwon Water has experienced delays regarding the availability of consultants, contractors, and materials to complete work for this project. With consultants continuing to be close to capacity this remains an ongoing risk and may lead to unexpected delays.
Extended remediation timeframes	Medium	Low	While water level and quality improvements are evident, changing climatic conditions could impede the recovery seen to date or lead to another decline in the future.

Issue	Likelihood	Consequence	Comments
			While this is beyond Barwon Water's control, this may provide a barrier to meeting the remediation success targets.

Community Engagement

The thirteenth (13th) Remediation Reference Group (RRG) meeting was held via Zoom on 15 November 2023. This meeting was attended by Barwon Water, members of the community and stakeholder Remediation Reference Group and Southern Rural Water.

Topics discussed included:

- A follow up on actions from the last meeting
- Detail covered in the recent community information sessions and the feedback we received
- Status update on the July 2023 submission and when we expect to receive feedback from Southern Rural Water
- An update on the Barwon Downs Borefield Decommissioning Works and the adopted approach
- Progress against the Boundary Creek and Big Swamp Remediation Plan and the current conditions with Boundary Creek and Big Swamp.
- Check-in on the timing and frequency of the RRG meetings
- Next steps.

During this meeting, an open forum was also held for group members to raise any topics that were not discussed above and for members to ask any questions that they may have. A high-level summary of the feedback received during this meeting is outlined in the table below.

Table 7 Community feedback

Community Feedback Received	Response
A RRG member remarked that it was great to have the recent community information sessions. Low attendance may be a sign that people are happy with the progress being made.	Barwon Water also wondered whether the low attendance at one session was as a result of an additional session being added to cover the outcomes of the surrounding environment investigation. Barwon Water will also consider this when we are planning for any future community information sessions.

Community Feedback Received	Response
A RRG member enquired about the spillway crossing near Big Swamp where a pothole has again formed where the gravel track meets the concrete spillway and is creating a safety hazard.	Barwon Water previously filled this hole in early 2023 when water levels dropped following a wet period. Following the RRG meeting Barwon Water has again filled this with rock and cement and will continue to monitor this.
A RRG member enquired as to how much water is being released into the headwaters of Boundary Creek as part of the supplementary flow releases.	Barwon Water confirmed that 0.5 ML/day of supplementary flow releases were commenced on 14 November 2023. The release volume is adjusted depending on the flows in Boundary Creek and can vary between 0.0 and 3.0 ML/day.
A RRG member expressed an interest in seeing the outcomes of the climate resilience modelling work and were pleased to hear H.A.R.C has been appointed to conduct this work.	Barwon Water confirmed that we will share the outcomes of this work with the RRG members and once finalised with the community more broadly.
A RRG member enquired as to whether Barwon Water had made contact with the landholder suggested in the last meeting and reiterated the importance of involving the community in the follow up works along Deans Marsh, Matthews and Pennyroyal Creeks.	Barwon Water confirmed that they have attempted to make contact with the suggested landholder. Barwon Water has also been in touch with The Upper Barwon Landcare Network to identify potential landholders that we could engage with as part of the follow up works. Barwon Water will begin contacting these landholders in Q3 2023/2024.

During the November 2023 RRG meeting it was decided to reduce the frequency of the RRG meetings to twice per year (one in March/April and the other in August/September) instead of being held quarterly, given we are really moving into a routine implementation phase. The option for additional meetings will remain in case there are specific items to discuss, or feedback required outside of these routine meetings.

Success Targets

Since the implementation of the REPP in March 2020, the success targets have been reviewed and adapted over time based on feedback from the Remediation Reference Group, Southern Rural Water and the Independent Technical Review Panel. These were most recently updated as part of the revised REPP that was submitted to Southern Rural Water on 31 July 2023.

An update on progress against the relevant success targets will be provided in the 2023-2024 Annual Report along with the supporting monitoring data.

Technical Reports and Investigations

Relevant technical and investigation reports that have been completed to inform the Boundary Creek, Big Swamp and Surrounding Environment Remediation and Environmental Protection Plan can be accessed via Barwon Water's dedicated Your Say webpage via the following link: <https://www.yoursay.barwonwater.vic.gov.au/boundary-creek>

Barwon Water will proactively share links to technical reports as they are published so that Remediation Reference Group members have access to the latest information as it is shared.

Contingency Measures

As part of the REPP review process, Barwon Water has since developed a risk-based contingency approach that focuses on minimising the potential for high-risk events, should these persist following the implementation of the primary remedial actions.

This risk-based contingency approach, which has been developed in conjunction with the Remediation Reference Group, was submitted to Southern Rural Water on 31 July 2023 as part of the revised REPP.

REPP Amendments

The revised REPP was submitted to Southern Rural Water on 31 July 2023 following completion of the Ecological Risk Assessment and Palaeoenvironmental Study. This version of the REPP also included revisions based on the feedback received on the interim draft REPP that was submitted to Southern Rural Water on 22 December 2022.

Barwon Water is currently awaiting Southern Rural Water's feedback on the revised REPP so that this, along with the success targets and contingency measures, can be finalised.

Progress Report

Table 8 outlines the actions that have been completed, are currently in progress, or are yet to commence as part of implementation of the REPP through to the end of the 2025/26 monitoring and reporting period (30 June 2026). It is important to note that additional tasks may be added as they are identified during the implementation of the REPP.

Table 8 Task Tracker

#	Activity	Due Date	Status	Health Indicator	Comments
1.0	Meeting with SRW to be held at the Barwon Water office to develop work plan towards confirming priority actions relating to feedback provided.	30-Apr-20	Complete	Complete	Complete
2.0	Complete autumn macro-invertebrates survey	30-Jun-20	Complete	Complete	Report complete and is uploaded on website
3.0	Complete soil incubation testing	31-May-20	Complete	Complete	Report complete and uploaded to the website
4.0	Submit quarterly report to SRW and publish to website	30-Jun-20	Complete	Complete	Complete and uploaded to website
5.0	Scoping of SW-GW technical work packages required to inform detailed design and address feedback register	30-Nov-20	Complete	Complete	Complete
6.0	Complete installation of additional monitoring assets required to inform the Surrounding Environment Investigation	30-Jun-23	Complete	Complete	The installation of 21 additional groundwater bores and redevelopment and re-instatement of 3 former state observation bores was completed in June 2022. Barwon Water completed the last of the 5 new stream gauges in May 2023. Noting

#	Activity	Due Date	Status	Health Indicator	Comments
					that the East Barwon stream gauge instrumentation was subsequently removed in December 2022 due to the need to relocate the telemetry station. The East Barwon stream gauge reinstatement works have not yet been completed and remain on hold given the surrounding environment investigation has indicated that Barwon Water's historic management of groundwater pumping activities at the Barwon Downs borefield have not resulted in any environmentally significant adverse impacts at this location. On this basis, Barwon Water no longer plan to reinstate this stream gauge.
7.0	Conclusion of monitoring period enabling the capture of a full seasonal cycle of data to inform updates to the groundwater-surface water model and geochemical model.	31-Jul-20	Complete	Complete	The data collected from this work has since been included in the relevant technical reports.
8.0	REPP Feedback Work plan - Submission and Acceptance	31-Jul-20	Complete	Complete	Complete
9.0	Governance Framework - Submission and Acceptance	31-Jul-20	Complete	Complete	Complete
10.0	Barwon Water Communications and Engagement Plan	Ongoing	Ongoing	Ongoing	The Communications and Engagement Plan continues to be adapted in line with the adaptive management approach.
11.0	Submission of the updated REPP to Southern Rural Water to account for the current state of knowledge and close out any outstanding feedback. SRW to accept the updated REPP.	31-Jul-23	Complete	Complete	On 22 December 2023 Barwon Water submitted an interim draft of the revised REPP to Southern Rural Water for initial comment and feedback.

#	Activity	Due Date	Status	Health Indicator	Comments
					This was subsequently updated to account for the additional work and feedback and was submitted to Southern Rural Water on 31 July 2023.
12.0	Submit annual report to SRW and publish to Your Say website	30-Sep-20	Complete	Complete	Complete
13.0	Remediation Reference Group Meeting	2-Dec-20	Complete	Complete	Complete
14.0	Establish vegetation monitoring for Boundary Creek and Big Swamp Remediation Plan	31-Dec-20	Complete	Complete	Completed
15.0	Update groundwater-surface water model	31-Dec-20	Complete	Complete	Complete and uploaded to website
16.0	Submit quarterly report to SRW and publish to Your Say website	31-Dec-20	Complete	Complete	Complete
17.0	Remediation Reference Group Meeting	17-Mar-21	Complete	Complete	Complete
18.0	Submit quarterly report to SRW and publish to Your Say website	31-Mar-21	Complete	Complete	Complete
19.0	Remediation Reference Group Meeting	23-Jun-21	Complete	Complete	Complete
20.0	Submit quarterly report to SRW and publish to Your Say website	30-Jun-21	Complete	Complete	Complete and uploaded to website
21.0	Submission of detailed design of the hydraulic barriers outlining proposed controls or actions and any revisions to success measures/targets.	1-Jul-21	Complete	Complete	Complete. Submitted to Southern Rural Water on 1 July 2021. Barwon Water has since reviewed the viability of this remedial action as part of the Outcomes and Implications of the Upstream Treatment Investigation (Barwon Water, 2022) and no longer consider hydraulic barriers a potential remedial action due to the unintended impacts that would result from implementing this

#	Activity	Due Date	Status	Health Indicator	Comments
					approach. This has since been reflected in the revised REPP.
22.0	Update Hydro geochemical model	31-Jul-21	Complete	Complete	Complete and uploaded to website
23.0	Complete detailed design of contingency measure and feasibility assessment for up-stream for new upstream treatment method	31-Jul-21	Complete	Complete	<p>Barwon Water has since ruled out the use of the proposed semi-passive caustic magnesia treatment system. This decision was supported by Southern Rural Water and the Independent Technical Review Panel (ITRP) in their response received on 29 August 2022.</p> <p>Following completion of the Upstream Treatment Investigation in June 2022, Barwon Water have since developed a risk based contingency approach that focuses on minimising the potential for high-risk events, should these persist following the implementation of the primary remedial actions.</p> <p>As part of this, Barwon Water submitted the design on a mobile downstream contingency measure to Southern Rural Water on 31 July 2023.</p>
24.0	Remediation Reference Group Meeting	8-Sep-21	Complete	Complete	Complete
25.0	Submit annual report to SRW and publish to Your Say website	30-Sep-21	Complete	Complete	Complete and uploaded to website
26.0	Remediation Reference Group Meeting	9-Dec-21	Complete	Complete	Complete
27.0	Submit quarterly report to SRW and publish to Your Say website	31-Dec-21	Complete	Complete	Complete and uploaded to website

#	Activity	Due Date	Status	Health Indicator	Comments
28.0	Completion of upstream treatment investigation and development of Trial Plan	14-Jan-22	Complete	Complete	Complete. Submitted to SRW on 14 January 2022. Barwon Water has since ruled out the use of the proposed semi-passive caustic magnesia treatment system. This decision was supported by Southern Rural Water and the Independent Technical Review Panel (ITRP) in their response received on 29 August 2022.
29.0	Remediation Reference Group Meeting	21-Mar-21	Complete	Complete	Complete
30.0	Submit quarterly report to SRW and publish to Your Say website	31-Mar-22	Complete	Complete	Complete and uploaded to website
31.0	Hosted community information session in Winchelsea	10-May-22	Complete	Complete	Complete
32.0	Hosted community information session in Colac	17-May-22	Complete	Complete	Complete
33.0	Remediation Reference Group Meeting	8-Jun-22	Complete	Complete	Complete
34.0	If trial plan is approved undertake upstream treatment trial	30-Jun-22	Complete	Complete	Barwon Water has since ruled out the use of the proposed semi-passive caustic magnesia treatment system. This decision was supported by Southern Rural Water and the Independent Technical Review Panel (ITRP) in their response received on 29 August 2022.
35.0	Decision on implementation of full-scale upstream treatment, hydraulic barriers, and downstream treatment	30-Jun-22	Complete	Complete	
36.0	Submit quarterly report to SRW and publish to Your Say website	30-Jun-22	Complete	Complete	Complete and uploaded to website
37.0	Remediation Reference Group Meeting	21-Sep-22	Complete	Complete	Complete

#	Activity	Due Date	Status	Health Indicator	Comments
38.0	Submit quarterly report to SRW and publish to Your Say website	30-Sep-22	Complete	Complete	Complete and uploaded to website
39.0	Submit annual report to SRW and publish to website	30-Sep-22	Complete	Complete	Complete and uploaded to website
40.0	Remediation Reference Group Meeting	16-Nov-22	Complete	Complete	Complete
41.0	Submit quarterly report to SRW and publish to Your Say website	31-Dec-22	Complete	Complete	Complete and uploaded to website
42.0	Remediation Reference Group Meeting	8-Mar-23	Complete	Complete	Complete
43.0	Submit quarterly report to SRW and publish to Your Say website	31-Mar-23	Complete	Complete	Complete and uploaded to website
44.0	Remediation Reference Group Meeting	14-Jun-23	Complete	Complete	Complete
45.0	Submit quarterly report to SRW and publish to Your Say website	14-Jul-23	Complete	Complete	Complete and uploaded to website
46.0	Submission of the Ecological Risk Assessment to Southern Rural Water	31-Jul-23	Complete	Complete	Submitted to Southern Rural Water on 31 July 2023
47.0	Submission of the Paleoenvironmental Study of Big Swamp to Southern Rural Water	31-Jul-23	Complete	Complete	Submitted to Southern Rural Water on 31 July 2023
48.0	Development of the Barwon Downs Borefield Decommissioning Plan	31-Jul-23	Complete	Complete	Submitted to Southern Rural Water as part of a bore decommissioning licence application on 17 July 2023. Southern Rural Water has since granted Barwon Water a licence to decommission the Barwon Downs Borefield production bores and we are currently working towards engaging a suitably qualified contractor to conduct these works.

#	Activity	Due Date	Status	Health Indicator	Comments
49.0	Submission of the revised downstream treatment contingency measures	31-Jul-23	Complete	Complete	Submitted to Southern Rural Water on 31 July 2023
50.0	Provide the outcomes of the Surrounding Environment Investigation to Southern Rural Water to determine if further remedial works is required	31-Jul-23	Complete	Complete	Submitted to Southern Rural Water on 31 July 2023
51.0	Remediation Reference Group Meeting	6-Sep-23	Complete	Complete	Complete
52.0	Submit annual report to SRW and publish to website	30-Sep-23	Complete	Complete	Complete and uploaded to website
53.0	Submit quarterly report to SRW and publish to website	14-Oct-23	Complete	Complete	Complete and uploaded to website
54.0	Remediation Reference Group Meeting	15-Nov-23	Complete	Complete	Complete
55.0	Submit quarterly report to SRW and publish to website	14-Jan-24	Complete	Complete	Complete and uploaded to website
56.0	Remediation Reference Group Meeting	Mar/Apr-24	Not started		
57.0	Submit quarterly report to SRW and publish to website	14-Apr-24	Not started		
58.0	Submit quarterly report to SRW and publish to website	14-Jul-24	Not started		
59.0	Remediation Reference Group Meeting	Aug/Sep-24	Not started		
60.0	Submit annual report to SRW and publish to website	30-Sep-24	Not started		
61.0	Submit quarterly report to SRW and publish to website	14-Oct-24	Not started		

#	Activity	Due Date	Status	Health Indicator	Comments
62.0	Completion of follow up investigations on Deans Marsh, Matthews and Pennyroyal Creeks	31-Dec-24	Not started		Scope to be finalised following receipt of Southern Rural Water's feedback on the July 2023 submissions.
63.0	Completion of further modelling work to track recovery and test what may happen under future climate scenarios	31-Dec-24	In progress	On Track	Works commenced 27 November 2023
64.0	Submit quarterly report to SRW and publish to website	14-Jan-25	Not started		
65.0	Remediation Reference Group Meeting	Mar/Apr-25	Not started		
66.0	Submit quarterly report to SRW and publish to website	14-Apr-25	Not started		
67.0	Submit quarterly report to SRW and publish to website	14-Jul-25	Not started		
68.0	Remediation Reference Group Meeting	Aug/Sep-25	Not started		
69.0	Submit annual report to SRW and publish to website	30-Sep-25	Not started		
70.0	Submit quarterly report to SRW and publish to website	14-Oct-25	Not started		
71.0	Completion of Fish Surveys in the Upper Barwon	31-Dec-25	Not started		
70.0	Submit quarterly report to SRW and publish to website	14-Jan-26	Not started		
71.0	Remediation Reference Group Meeting	Mar/Apr-26	Not started		
72.0	Submit quarterly report to SRW and publish to website	14-Apr-26	Not started		