

Procedure

Tracking and claiming of additional costs for extraordinary water events

This document is the property of Seqwater. It must not be copied or reproduced in any way whatsoever without the authority of Seqwater. This document is uncontrolled when printed. An electronic database manages and stores the controlled version.



Contents

| | | |
|----------|------------------------------------|----------|
| 1 | Purpose | 3 |
| 1.1 | Context | 3 |
| 1.2 | Extraordinary water events | 3 |
| 2 | Scope | 4 |
| 3 | Definitions (if applicable) | 5 |
| 4 | Roles and Responsibilities | 5 |
| 5 | Procedure | 6 |
| 5.1 | Event triggered | 6 |
| 5.2 | Manage event | 6 |
| 5.3 | Document event & implications | 7 |
| 5.4 | Update financial records | 8 |
| 5.5 | Submit claim | 8 |
| 6 | Record keeping | 8 |

| Revision no | Doc Owner | Version Date |
|-------------|-----------------------------------|--------------|
| 1 | Manager Operations Central Region | 19/01/2018 |

1 Purpose

The purpose of this document is to define the methodology for tracking and claiming the additional costs (i.e. over and above normal operating model) incurred as a result of an 'extraordinary' water event.

The intent is to ensure Seqwater recovers the justifiable additional costs (i.e. costs not included in the OPEX budget for normal operations) incurred in treating extraordinary water events to ensure water quality requirements are met.

1.1 Context

Seqwater submits its operating cost (OPEX) budget for each regulatory period, and once approved, forms the OPEX expenditure allowance which is part of the building block used to derive prices over the period. Based on historical experience, Seqwater included a 'contingency' provision of \$1,200,000 in its 2017 submission to cater for extraordinary water events (i.e. dirty water and/or water with high conductivity). These are events that may not meet the definition of a Review event – such as cyclones or floods – but nevertheless will incur substantial unavoidable increased costs.

In its draft report the QCA excluded the contingency provision from the allowable costs, based on recommendations from its consultant, KPMG, which indicated that it could not determine whether the proposed level was efficient without information on the frequency of these events and the costs associated with them. QCA also noted that Seqwater's actual chemical costs for 2015-18 had been relatively stable which suggested that there had been no significant variability in feedwater quality requiring a contingency allowance.

At a later meeting Seqwater proposed, and QCA indicated that it was open to considering, the concept of using an agreed methodology to define the event and calculate the additional (i.e. over and above normal operating model) costs associated with an event. Seqwater would then recover these costs by submitting an ex-post claim at the end of the regulatory period.

1.2 Extraordinary water events

On a yearly basis Seqwater will typically experience a number of 'extraordinary' water events which can include:

- 'Dirty' water; that is, water that has high turbidity;
- Water with high conductivity or elevated bromide;
- Water with elevated organics or colour;
- Water with taste and/or odour issues; and
- Other water quality issues which are shown to have a demonstrable impact on treatment costs.

Whilst there may be day to day spikes in the quality of water, extraordinary water events will last over a period of days to weeks or even months and are managed as discrete events; with changes to roles and responsibilities and normal operating protocols. These events will generally trigger a discrete action plan, e.g. the Mt Crosby Bromide Management Plan.

The timing and location of these events is unpredictable, and the costs are not built into the locational BAU forecast costs submitted by Seqwater. A relatively stable cost profile is not an indicator that these events are not occurring as noted by QCA as combined they may lead to an ongoing cost profile that is higher than BAU. Infrastructure enhancements and other measures such as the filter upgrades or network redeployments which were mentioned in the 2015-18 QCA review allow Seqwater greater capacity to *manage* the events but the cost impact will continue.

| Revision no 1 | Doc Owner | Version Date |
|---------------|-----------------------------------|--------------|
| | Manager Operations Central Region | 19/01/2018 |

For these reasons Seqwater is proposing an ex-post adjustment which fairly compensates it for increased and unavoidable costs.

The costs associated with treating extraordinary water events can be substantial, particularly the chemical costs. Two examples of extraordinary water events are provided below:

- Ex-cyclone Debbie event: Ex-cyclone Debbie caused significant rainfall in the Mt Crosby Water Treatment Plants (WTPs) catchment area from 28th to 30th March 2017, and Mt Crosby WTPs experienced high turbidity water of up to 1100 NTU. It took about 4-5 weeks for the raw water quality to return back to its normal level. To treat high turbidity raw water and to maintain treated water quality, substantial chemicals were required at Mt Crosby Plants from 30th March to 10th April 2017, resulting in approximately \$500k additional chemical costs.
- As a result of substantial rainfall from 15 to 22 October 2017, Mt Crosby experienced three conductivity spikes lasting several days each. In order to maintain water quality, substantial additional chemicals were required at Mt Crosby Water Treatment Plants WTPs from 20 October and 15 November, resulting in \$443k in additional chemical costs.

The Mt Crosby WTPs typically experience extraordinary water events of the above scale 2-3 times each year.

The example of the High Conductivity Event at Mt Crosby in Oct-Nov 2017 will be used throughout this procedure as a mechanism for demonstrating how an extraordinary water event will be documented for the purposes of tracking and claiming additional costs as a result of these events.

2 Scope

This procedure applies to extraordinary water events, which will be triggered/declared when the water quality criterion exceeds the trigger points specified in Table 1.

Due to time constraints this version of the procedure only covers Mt Crosby WTPs. This will be expanded to include other WTPs in the next version.

Table 1 - Water Criteria and Trigger Points

| Criteria | Trigger | Notes |
|-----------------------------------|--|---|
| Raw water turbidity | >30 NTU | High raw water turbidity is generally required additional chemicals for the treatment to achieve the target treated water quality for turbidity. |
| Raw water conductivity | ≥ 450 µs/cm (corresponding bromide ≥ 0.18 mg/L) | Conductivity is used as a trigger for raw water bromide levels. High conductivity is generally associated with elevated bromide levels which can increase Disinfection By-Products (DBPs) Trihalomethanes (THMs) by the interaction of Natural Organic Matter (NOM) and chlorine during chlorination of filtered water. Elevated THMs are known to have potential health hazards. |
| Raw water organics or true colour | >25 HU | Raw water with elevated colour or organics is normally required additional chemicals to ensure that DBPs can be maintained within the specified limit. |
| Taste and odour | 10 ng/L | |
| Algal toxins | Present (Yes) | Presence of algal toxins that are not chlorine treatable. |

| Revision no | Doc Owner | Version Date |
|-------------|-----------------------------------|--------------|
| 1 | Manager Operations Central Region | 19/01/2018 |

The scope of this document does not include the procedure for ‘managing’ the extraordinary water events (i.e. discrete roles and responsibilities for water testing, analysis, communication, etc.). These are detailed in specific management plans, e.g. Mt Crosby Bromide Management Plan.

This procedure will not apply for extraordinary water events (e.g. as a result of floods, etc.) where claims for additional costs are recoverable via other mechanisms (e.g. insurance claims),

3 Definitions (if applicable)

| Term | Definitions |
|------|----------------------------------|
| DBPs | Disinfection By-Products |
| NOM | Natural Organic Matter |
| OPEX | Operating Expenditure |
| QCA | Queensland Competition Authority |
| THMs | Trihalomethanes |
| WTPs | Water Treatment Plants |

4 Roles and Responsibilities

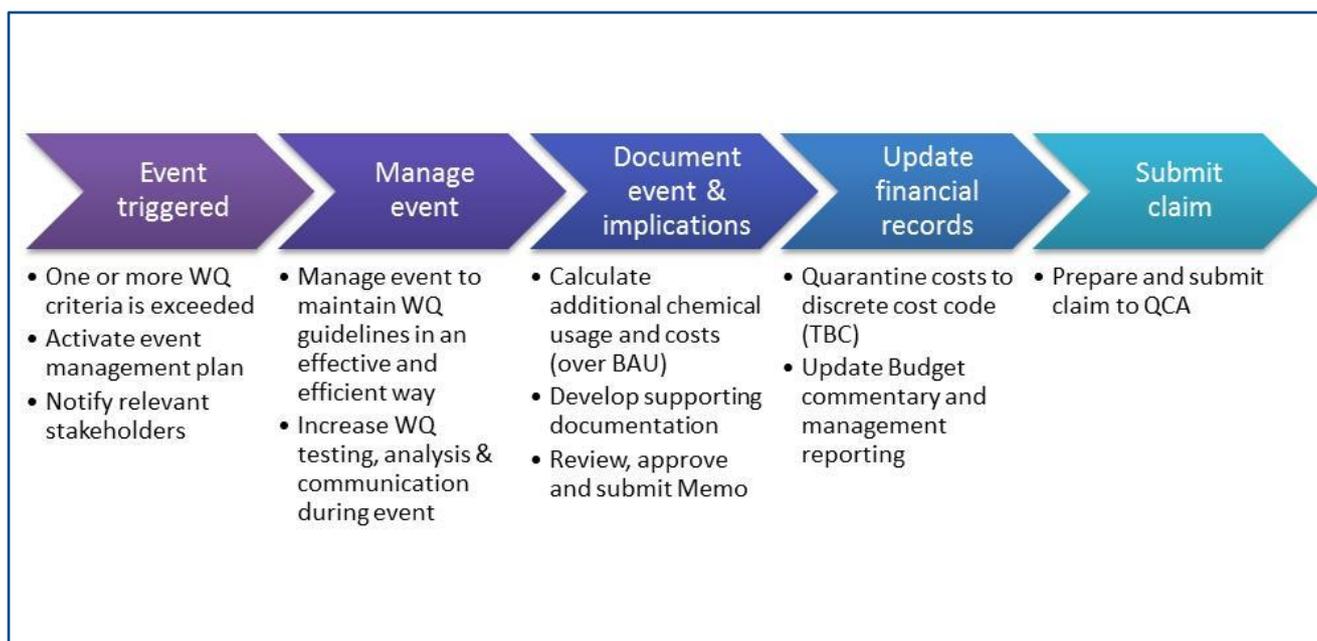
| Role | Responsibility |
|----------------------------|--|
| Regional Managers | Oversee the implementation of this procedure for extraordinary water events and ensure documentation is provided to Finance (management accountants) & Manager Services & Pricing |
| General Manager Operations | Review and approve Memo justifying claim for additional costs associated with an extraordinary water event. |
| Manager Services & Pricing | Obtain QCA input to, and agreement of, the proposed methodology (outlined in this procedure). Collate documentation and additional costs associated with extraordinary water events and submit an ex post claim to the QCA at the end of each regulatory period. |
| Chief Financial Officer | Authorise transfer of additional costs to discrete cost code (TBC). Ensure management reporting documentation is updated to include commentary on additional costs associated with extraordinary water events (including exclusion of these costs from KPI calculations). |
| Coordinator Supply | Manage the implementation of this procedure and coordinate the collection of records and data. |
| Senior Process Engineer | Provide analysis and support documentation to support the tracking and calculation of additional costs |

| Revision no 1 | Doc Owner | Version Date |
|---------------|-----------------------------------|--------------|
| | Manager Operations Central Region | 19/01/2018 |

5 Procedure

An overview of the sequence of events and activities associated with managing an extraordinary water event and subsequent claim for costs is summarised in Figure 1. This is detailed further in the following paragraphs. A similar process would be followed for Review events.

Figure 1- Overview of the process flow



5.1 Event triggered

The procedure for tracking and claiming additional costs associated with an extraordinary water event is activated when the triggers in Table 1 are met.

The relevant Coordinator in charge of the water treatment plant (e.g. Coordinator Supply Central) experiencing the extraordinary event will notify the relevant stakeholders, including:

- Regional Manager
- Senior Process Engineer
- Water Quality representatives
- Coordinator – Supply Systems (Networks) (if a grid connected WTP)
- Management Accountant

5.2 Manage event

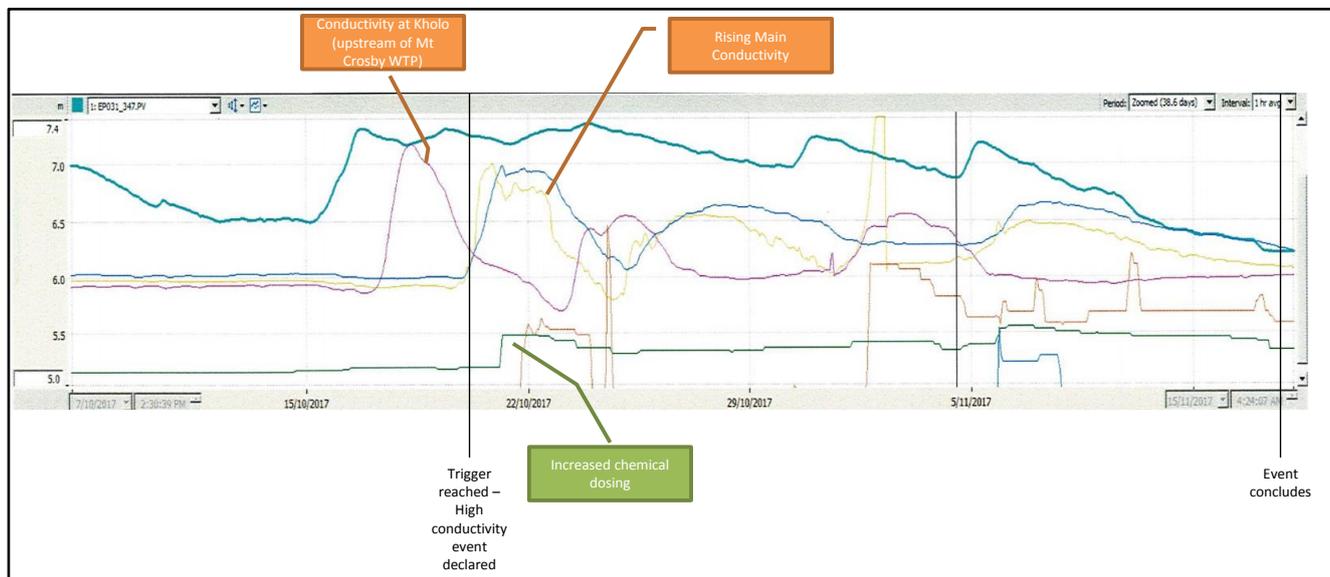
Upon consultation with key stakeholders, the relevant Coordinator will activate relevant management plans for managing the extraordinary water event (e.g. Mt Crosby Bromide Management Plan). These plans/protocols typically increase water quality testing and increased chemical dosing to treat the water issues whilst maintain water quality of treated water to accepted specifications.

During these events analysis is undertaken on an on-going basis to ensure the most effective and efficient dosing/treatment regime for the conditions being experienced. Figure 2 provides an example of the monitoring

| Revision no 1 | Doc Owner | Version Date |
|---------------|-----------------------------------|--------------|
| | Manager Operations Central Region | 19/01/2018 |

of the high conductivity event at Mt Crosby and the adjustments of chemical dosing undertaken to reduce the effects of high conductivity (an indication of high bromide) in the water. The Figure clearly shows the marked increase of raw water conductivity from typical levels to the spikes resulting from changes to the water quality which resulted from substantial rainfall in the catchment areas upstream of Mt Crosby.

Figure 2 - High conductivity and increased chemical dose rates Oct - Nov 2017



At the conclusion of the event, the Coordinator Supply will de-activate the plan, communicate this to stakeholders and return to business as usual operations.

5.3 Document event & implications

Following the event, key participants will develop and collate documentation to support a claim for additional costs associated with the event.

This will include:

- details of the extraordinary event,
- calculation of additional costs, and
- supporting data (e.g. graphs, etc.).

Any additional costs will be incremental only. No BAU costs will be included. That means no ordinary time will be costed against the event on the basis that these costs will already be provided for under the initial QCA allowance. Overtime, materials, additional chemicals and electricity will be included. If another more expensive plant is used, only the difference between the costs at the two plants will be included in the calculations on the basis that the costs at the original plant would have been incurred anyway.

The information will be summarised in an internal Memo, with supporting detailed documentation.

The Memo will be endorsed by the relevant Regional Manager who will forward the document to the General Manager Operations who will approve the Memo. The approved Memo will be forwarded to Chief Financial Officer and Manager – Services & Pricing.

Appendix A provides examples of the Memo to be used for internal sign off and supporting documentation.

| Revision no | Doc Owner | Version Date |
|-------------|-----------------------------------|--------------|
| 1 | Manager Operations Central Region | 19/01/2018 |

5.4 Update financial records

Upon receipt of the approved Memo, the Chief Financial Officer (CFO) will authorise the formal tracking of additional costs associated with the event and update Budget commentary (in Board reports, reports to QCA, etc.) to include notes on extraordinary costs.

5.5 Submit claim

The Manager – Services and Pricing will use the Memo and supporting documentation to prepare a submission to QCA for a post ex claim at end of regulatory period.

6 Record keeping

This procedure will be maintained in Q-Pulse and will be reviewed at least every three years. Documentation produced in accordance with this procedure will be saved in the REX document management system.

| Revision no | Doc Owner | Version Date |
|-------------|-----------------------------------|--------------|
| 1 | Manager Operations Central Region | 19/01/2018 |