

**Torres Strait Island**  
REGIONAL COUNCIL

**Engineering Services**

# ANNUAL DRINKING WATER QUALITY ANNUAL REPORT 2017-18

Torres Strait Island Regional Council  
Service Provider SP500

This report has been prepared in accordance with the Drinking Water Quality Management Plan Report Guidance Note.

## Document and Related Information Controller:

ECM Document Number: 238394

| Author     | Reviewer      | Revision | Date       |
|------------|---------------|----------|------------|
| Emma Evans | Toni Veronese | 1        | 10/12/2018 |
|            |               |          |            |
|            |               |          |            |

Manager Water & Wastewater: Toni Veronese  
Phone: (07) 4034 5744  
Email: [Toni.Veronese@tsirc.qld.gov.au](mailto:Toni.Veronese@tsirc.qld.gov.au)

## Table of Contents

|  |    |
|--|----|
| Document and Related Information Controller:.....  | 2  |
| 1 Introduction.....  | 4  |
| 2 Summary of Schemes Operated.....   | 5  |
| 3 Implementation of Drinking Water Quality Management Plan.....                                      | 6  |
| 3.1 Risk Management Improvement Plan.....  | 6  |
| 3.2 Water Operator Training.....   | 6  |
| 3.3 The Safe and Healthy Drinking Water in Indigenous Local Government Areas<br>Project – Pilot..... | 7  |
| 3.4 Future Projects to Improve Water Quality.....  | 7  |
| 4 Verification Monitoring.....   | 8  |
| 4.1 E. coli Results.....   | 10 |
| 5 Events that Affected Water Quality in 2017-18.....   | 19 |
| 6 Customer Complaints.....   | 20 |
| 6.1 Alleged Illness.....   | 20 |
| 6.2 Colour Complaints.....   | 20 |
| 6.3 Taste and Odour Complaints.....  | 21 |
| 7 DWQMP Review Outcomes.....   | 22 |
| 8 DWQMP Audit Findings.....  | 23 |
| Appendix A.....  | 28 |
| Risk Management Improvement Plan.....  | 28 |
| Appendix B.....  | 29 |
| Sampling Compliance Results 2017-18.....   | 29 |
| Table 1: Scheme Details.....   | 5  |
| Table 2: Drinking Water Quality Performance - Verification Monitoring.....                           | 8  |
| Table 3: E. coli Results.....  | 11 |
| Table 4: Water Quality Failures Reported to Regulator.....   | 19 |
| Table 5: Customer Complaints.....  | 20 |
| Table 6: Review Outcomes.....  | 22 |
| Table 7: DWQMP Audit Findings and Status.....  | 24 |

## 1 Introduction

This is the Drinking Water Quality Management Plan (DWQMP) report for Torres Strait Island Regional Council (TSIRC) for the year ended 30 June 2018. TSIRC is a registered service provider, identification (SPID) number 500, serving 4,500 people across 15 communities on 14 islands in the Torres Strait.

| Population Served | No. of Raw Water Storage Facilities |
|-------------------|-------------------------------------|
| 4,509             | 12 Lagoons                          |

| No. of Treated Water Storage Facilities | Length of Delivery Mains |
|---|--------------------------|
| 19 Reservoirs                           | 105 km                   |

| No. of Sampling Locations | No. of Customer Complaints |
|---------------------------|----------------------------|
| 15 communities x 5 = 75   | Nil                        |

Implementation of the approved DWQMP ensures safe drinking water is consistently and reliably provided to the communities served. This report summarises compliance with the approved plan over the financial year and includes:

- Activities undertaken during the year in operating the drinking water schemes
- Drinking water quality results for the year
- Summary of events that affected water quality during the year
- DWQMP audit findings

This report is submitted to the Department of Natural Resources, Mines and Energy and is made available to the public through our website or for inspection upon request at council office.

## 2 Summary of Schemes Operated

Table 1 summarises the schemes operated by TSIRC.

**Table 1: Scheme Details**

| Scheme Name     | Population Served | Connections | Catchment Characteristics   | Treatment   |
|-----------------|-------------------|-------------|---|---|
| <b>Badu</b>     | 813               | 244         | 3 x Wells   | Aeration<br>Floc Dosing<br>Sand Filter<br>Chlorine Disinfection |
| <b>Boigu</b>    | 271               | 79          | 3 x Desalination Units<br>Lagoon (rainfall)                                   | Media Filter<br>Chlorine Disinfection                           |
| <b>Dauan</b>    | 191               | 54          | 4 x Wells<br>Lagoon (rainfall)  | Media Filter<br>Chlorine Disinfection                           |
| <b>Erub</b>     | 328               | 109         | 1 x Well<br>Lagoon (rainfall)   | Floc Dosing & Clarifier<br>Sand Filter<br>Chlorine Disinfection |
| <b>Iama</b>     | 319               | 80          | 2 x Desalination Units<br>1 x Desalination Unit (mobile)                      | Desalination<br>Chlorine Disinfection                           |
| <b>Kirriiri</b> | 268               | 80          | 1 x Well<br>Torres Shire Council (TSC)<br>Water Supply                        | Filtration by TSC<br>Chlorine Disinfection                      |
| <b>Kubin</b>    | 187               | 88          | 1 x Well<br>1 x Weir<br>Lagoon (rainfall)                                     | Media Filter<br>Chlorine Disinfection                           |
| <b>Mabuiag</b>  | 210               | 75          | 1 x Desalination Unit (mobile)<br>Lagoon (rainfall)                           | Media Filter<br>Chlorine Disinfection                           |
| <b>Masig</b>    | 270               | 104         | 1 x Desalination Unit (mobile)<br>Lagoon (rainfall)                           | Media Filter<br>Chlorine Disinfection                           |
| <b>Mer</b>      | 453               | 125         | 3 x Desalination Units<br>1 x Desalination Unit (mobile)<br>Lagoon (rainfall) | Chlorine Disinfection   |
| <b>Poruma</b>   | 167               | 62          | 1 x Desalination Unit<br>Lagoon (rainfall)                                    | Media Filter<br>Chlorine Disinfection                           |
| <b>Saibai</b>   | 465               | 98          | Lagoon (rainfall)   | Media Filter<br>Chlorine Disinfection                           |
| <b>St Pauls</b> | 237               | 105         | 2 x Well<br>1 x Weir<br>2 x Desalination Units (mobile)                       | Media Filter<br>Chlorine Disinfection                           |
| <b>Ugar</b>     | 85                | 31          | 2 x Wells<br>Lagoon (rainfall)<br>1 x Desalination Unit (mobile)              | Bag Filter<br>Chlorine Disinfection                             |
| <b>Warraber</b> | 245               | 62          | Lagoon (rainfall)<br>1 x Desalination Unit<br>1 x Desalination Unit (mobile)  | Media Filter<br>Chlorine Disinfection                           |

### 3 Implementation of Drinking Water Quality Management Plan

Implementation of the DWQMP is an ongoing process, and an assessment of the implementation actions in 2017-18 has been undertaken. After reviews by the regulator and internal reviews (refer 7 DWQMP Review Outcomes) following staff changes, the following were areas of focus for improvement in 2017-18:

- Assessment of risks
- Operational monitoring and log sheet compliance
- Verification monitoring and sampling compliance

Further work is still needed in areas such as staff awareness and training, operational and maintenance procedures and incident management, which has been planned for 2018-19.

#### 3.1 Risk Management Improvement Plan

A new Risk Management Improvement Plan (RMIP) was established following a review of the DWQMP Risk Assessment and was submitted to the Regulator in October 2018. A copy of the RMIP is included in Appendix A.

#### 3.2 Water Operator Training

During the year, eleven Water Officers undertook and completed their Certificate II and Certificate III in Water Industry Operations. This training provides the knowledge and skills required to monitor, operate and maintain scheme operations. Major Infrastructure Program 6 (MIP6) funding will cover training for nine Water and Wastewater staff in the current year. Funding limitations and the remote location of operators makes Certificate II and III training for all staff difficult.

Initial discussions have taken place with the TSIRC learning and development team regarding the use of the e-learning platform for further in-house training and implementation of the DWQMP.

A Water Symposium was convened in October 2018 on Kirriri, and attended by most of the Water Officers. Details of the training will be included in the 2019 Annual Report.

Compliance of log sheet completion and submission has been monitored and improved significantly over the year, as shown in Figure 1.

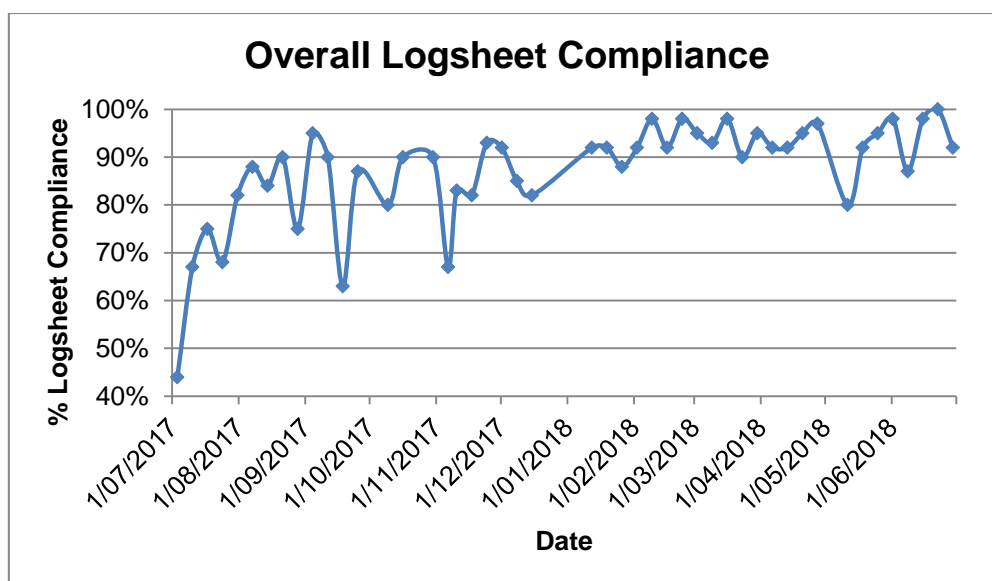


Figure 1 Overall Log sheet Compliance 2017-18

### 3.3 The Safe and Healthy Drinking Water in Indigenous Local Government Areas Project – Pilot

The Safe and Healthy Drinking Water in Indigenous Local Government Areas Project was rolled out by Tropical Public Health Services with Torres Strait Island Regional Council staff in 2017. The project is a new approach to building the capacity of indigenous water operators to assure the ongoing safety and quality of water supplied by indigenous local governments. As part of the project, drinking water disinfection technology has been improved and modernised, with upgrades at Mabuag and lama being completed during the 2017-18 year. Funding has been allocated to install online chlorine dosing/analysing systems linked to SCADA at Badu, Dauan, Masig and Ugar in 2019.

### 3.4 Future Projects to Improve Water Quality

In addition to items in the RMIP, the following capital projects have been planned in 2018-19 to improve water quality:

- Replacement of the filtration system at Kirri, currently in the design phase
- New filtration system and reservoir at Saibai
- Installation of new chlorine dosing and monitoring technology, and automated flocculation dosing at Erub and Dauan WTPs

## 4 Verification Monitoring

The approved DWQMP requires 6-monthly sampling for all schemes for metals, nutrients, anions and physical properties. Due to logistical issues, these samples were not collected for the following schemes in the 2017-18 financial year:

- Dauan
- Kirriri
- Poruma
- Ugar
- Erub
- Masig
- Saibai
- Warraber
- lama
- Mer
- St Pauls

TSIRC is reliant on commercial freight providers to transport samples and sample bottles between the islands and the Cairns and lama laboratories, TSIRC is continually working on improving the sampling logistics with the Cairns Laboratory and freight providers to ensure verification sampling is conducted twice per year for each scheme. Sampling compliance is monitored, and a monthly summary of samples taken and submitted to the lab are included in Appendix B.

Table 2 summarises the water quality sample results from the Cairns Laboratory.

**Table 2: Drinking Water Quality Performance - Verification Monitoring**

| Scheme name | Parameter    | Water quality criteria (i.e. ADWG health guideline value) | No. of samples required to be collected per year (per approved DWQMP) | No. of samples actually collected and tested | No. of non-compliant samples | Comments   |
|-------------|--------------|---|---|--|------------------------------|--|
| Badu        | Chloride     | 250 mg/L  | 2   | 1  | 0                            |  |
| Badu        | Colour       | ≤ 15.0 Hu   | 2   | 1  | 0                            |  |
| Badu        | Conductivity | < 1000 µS/cm  | 2   | 1  | 0                            |  |
| Badu        | Fluoride     | 1.5 mg/L  | 2   | 1  | 0                            |  |
| Badu        | Hardness     | 60-200 mg/L CaCO <sub>3</sub>                             | 2   | 1  | 1<br>(27/06/2018)            | Reported result was < 60 mg CaCO <sub>3</sub> which is below ADWG guideline for aesthetics. Not reported to regulator since aesthetic quality. |
| Badu        | Iron         | 0.3 mg/L  | 2   | 1  | 0                            |  |



**Annual Report 2017-18  
ECM #238394**

| Scheme name | Parameter    | Water quality criteria (i.e. ADWG health guideline value) | No. of samples required to be collected per year (per approved DWQMP) | No. of samples actually collected and tested | No. of non-compliant samples | Comments   |
|-------------|--------------|---|---|--|------------------------------|--|
| Badu        | Manganese    | < 0.05 mg/L   | 2   | 1  | 0                            |  |
| Badu        | pH           | 6.5 – 8.5   | 2   | 1  | 0                            |  |
| Badu        | Sodium       | 180 mg/L  | 2   | 1  | 0                            |  |
| Badu        | Sulphate     | ≤ 250 mg/L  | 2   | 1  | 0                            |  |
| Badu        | Turbidity    | < 1 NTU   | 2   | 1  | 0                            |  |
| Boigu       | Chloride     | 250 mg/L  | 2   | 1  | 0                            |  |
| Boigu       | Colour       | ≤ 15.0 Hu   | 2   | 1  | 0                            |  |
| Boigu       | Conductivity | < 1000 µS/cm  | 2   | 1  | 0                            |  |
| Boigu       | Fluoride     | 1.5 mg/L  | 2   | 1  | 0                            |  |
| Boigu       | Hardness     | 60-200 mg/L CaCO <sub>3</sub>                             | 2   | 1  | 1<br>(13/06/2018)            | Reported result was < 60 mg CaCO <sub>3</sub> which is below ADWG guideline for aesthetics. Not reported to regulator since aesthetic quality. |
| Boigu       | Iron         | 0.3 mg/L  | 2   | 1  | 0                            |  |
| Boigu       | Manganese    | < 0.05 mg/L   | 2   | 1  | 0                            |  |
| Boigu       | pH           | 6.5 – 8.5   | 2   | 1  | 0                            |  |
| Boigu       | Sodium       | 180 mg/L  | 2   | 1  | 0                            |  |
| Boigu       | Sulphate     | ≤ 250 mg/L  | 2   | 1  | 0                            |  |
| Boigu       | Turbidity    | < 1 NTU   | 2   | 1  | 0                            |  |
| Kubin       | Chloride     | 250 mg/L  | 2   | 1  | 0                            |  |
| Kubin       | Colour       | ≤ 15.0 Hu   | 2   | 1  | 0                            |  |
| Kubin       | Conductivity | < 1000 µS/cm  | 2   | 1  | 0                            |  |
| Kubin       | Fluoride     | 1.5 mg/L  | 2   | 1  | 0                            |  |
| Kubin       | Hardness     | 60-200 mg/L CaCO <sub>3</sub>                             | 2   | 1  | 1<br>(10/10/ 2017)           | Reported result was < 60 mg CaCO <sub>3</sub> which is below ADWG guideline for aesthetics. Not reported to regulator since aesthetic quality. |

| Scheme name | Parameter    | Water quality criteria (i.e. ADWG health guideline value) | No. of samples required to be collected per year (per approved DWQMP) | No. of samples actually collected and tested | No. of non-compliant samples | Comments   |
|-------------|--------------|---|---|--|------------------------------|--|
| Kubin       | Iron         | 0.3 mg/L  | 2   | 1  | 0                            |  |
| Kubin       | Manganese    | < 0.05 mg/L   | 2   | 1  | 0                            |  |
| Kubin       | pH           | 6.5 – 8.5   | 2   | 1  | 0                            |  |
| Kubin       | Sodium       | 180 mg/L  | 2   | 1  | 0                            |  |
| Kubin       | Sulphate     | ≤ 250 mg/L  | 2   | 1  | 0                            |  |
| Kubin       | Turbidity    | < 1 NTU   | 2   | 1  | 0                            |  |
| Mabuiag     | Chloride     | 250 mg/L  | 2   | 1  | 0                            |  |
| Mabuiag     | Colour       | ≤ 15.0 Hu   | 2   | 1  | 0                            |  |
| Mabuiag     | Conductivity | < 1000 µS/cm  | 2   | 1  | 0                            |  |
| Mabuiag     | Fluoride     | 1.5 mg/L  | 2   | 1  | 0                            |  |
| Mabuiag     | Hardness     | 60-200 mg/L CaCO <sub>3</sub>                             | 2   | 1  | 1<br>(28/06/2018)            | Reported result was < 60 mg CaCO <sub>3</sub> which is below ADWG guideline for aesthetics. Not reported to regulator since aesthetic quality. |
| Mabuiag     | Iron         | 0.3 mg/L  | 2   | 1  | 0                            |  |
| Mabuiag     | Manganese    | < 0.05 mg/L   | 2   | 1  | 0                            |  |
| Mabuiag     | pH           | 6.5 – 8.5   | 2   | 1  | 0                            |  |
| Mabuiag     | Sodium       | 180 mg/L  | 2   | 1  | 0                            |  |
| Mabuiag     | Sulphate     | ≤ 250 mg/L  | 2   | 1  | 0                            |  |
| Mabuiag     | Turbidity    | < 1 NTU   | 2   | 1  | 0                            |  |

#### 4.1 E. coli Results

Table 3 summarises the E. coli results for the year to June 2018. Compliance has improved from the 2016/17 year, with 11 out of the 15 schemes having 100% of samples complying at the end of the year compared with nine. The number of samples collected has also significantly improved due to better management of the sample and freight processes.

Table 3: E. coli Results

| Drinking Water Scheme  | Badu        |        |        |        |        |        |        |        |        |        |        |        |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |        |        |        |        |        |        |        |        |        |        |        |
| Month  | July        | Aug    | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 5           | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 35          | 40     | 45     | 45     | 50     | 55     | 60     | 60     | 60     | 60     | 60     | 60     |
| No. of failures for previous 12 month period                           | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 100.0%      | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | Yes         | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

| Drinking Water Scheme  | Boigu       |       |       |       |       |       |       |        |        |        |        |        |
|--|-------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |       |       |       |       |       |       |        |        |        |        |        |
| Month  | July        | Aug   | Sept  | Oct   | Nov   | Dec   | Jan   | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 3           | 5     | 0     | 5     | 5     | 5     | 0     | 0      | 5      | 5      | 5      | 4      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0     | 0     | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 32          | 37    | 37    | 42    | 47    | 52    | 52    | 42     | 42     | 42     | 42     | 42     |
| No. of failures for previous 12 month period                           | 1           | 1     | 1     | 1     | 1     | 1     | 1     | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 96.9%       | 97.3% | 97.3% | 97.6% | 97.9% | 98.1% | 98.1% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | No          | No    | No    | No    | No    | Yes   | Yes   | Yes    | Yes    | Yes    | Yes    | Yes    |

Annual Report 2017-18  
ECM #238394

| Drinking Water Scheme  | Dauan       |        |        |        |        |        |        |        |        |        |        |        |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |        |        |        |        |        |        |        |        |        |        |        |
| Month  | July        | Aug    | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 4           | 3      | 0      | 3      | 0      | 5      | 0      | 0      | 0      | 5      | 5      | 5      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 36          | 34     | 31     | 31     | 31     | 36     | 36     | 33     | 30     | 30     | 30     | 30     |
| No. of failures for previous 12 month period                           | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 100.0%      | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | Yes         | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

| Drinking Water Scheme  | Erub        |       |       |       |        |        |        |        |        |        |        |        |
|--|-------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |       |       |       |        |        |        |        |        |        |        |        |
| Month  | July        | Aug   | Sept  | Oct   | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 4           | 5     | 0     | 5     | 0      | 0      | 0      | 0      | 7      | 0      | 0      | 0      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0     | 0     | 0     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 49          | 49    | 49    | 45    | 40     | 40     | 35     | 31     | 31     | 26     | 21     | 21     |
| No. of failures for previous 12 month period                           | 2           | 2     | 2     | 1     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 95.9%       | 95.9% | 95.9% | 97.8% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | No          | No    | No    | No    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

Annual Report 2017-18  
ECM #238394

| Drinking Water Scheme  | Iama        |        |        |        |        |        |        |        |        |        |        |        |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |        |        |        |        |        |        |        |        |        |        |        |
| Month  | July        | Aug    | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 5           | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 0      | 5      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 18          | 23     | 28     | 30     | 35     | 40     | 45     | 50     | 55     | 60     | 55     | 55     |
| No. of failures for previous 12 month period                           | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 100.0%      | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | Yes         | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

| Drinking Water Scheme  | Kirriri     |       |        |        |        |        |        |        |        |        |        |        |
|--|-------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |       |        |        |        |        |        |        |        |        |        |        |
| Month  | July        | Aug   | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 4           | 4     | 0      | 5      | 5      | 0      | 5      | 5      | 5      | 4      | 4      | 0      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 73          | 69    | 57     | 50     | 47     | 47     | 48     | 49     | 49     | 49     | 49     | 41     |
| No. of failures for previous 12 month period                           | 7           | 5     | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 90.4%       | 92.8% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | No          | No    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

Annual Report 2017-18  
ECM #238394

| Drinking Water Scheme  | Kubin                               |       |       |       |       |       |       |       |       |       |       |       |
|--|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Year   | 2017 – 2018                         |       |       |       |       |       |       |       |       |       |       |       |
| Month  | July                                | Aug   | Sept  | Oct   | Nov   | Dec   | Jan   | Feb   | Mar   | Apr   | May   | Jun   |
| No. of samples collected   | 5                                   | 5     | 0     | 5     | 5     | 5     | 5     | 5     | 5     | 5     | 0     | 5     |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0                                   | 1     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| No. of samples collected in previous 12 month period                   | 40                                  | 45    | 45    | 45    | 50    | 55    | 60    | 60    | 60    | 60    | 55    | 55    |
| No. of failures for previous 12 month period                           | 0                                   | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     |
| % of samples that comply   | 100.0%                              | 97.8% | 97.8% | 97.8% | 98.0% | 98.2% | 98.3% | 98.3% | 98.3% | 98.3% | 98.2% | 98.2% |
| Compliance with 98% annual value                                       | Yes                                 | No    | No    | No    | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Comments   | Refer to DWI-7-500-00065 in Table 4 |       |       |       |       |       |       |       |       |       |       |       |

| Drinking Water Scheme  | Mabuiag     |        |        |        |        |        |        |        |        |        |        |        |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |        |        |        |        |        |        |        |        |        |        |        |
| Month  | July        | Aug    | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 5           | 0      | 5      | 0      | 0      | 0      | 0      | 0      | 5      | 0      | 0      | 0      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 23          | 23     | 28     | 23     | 20     | 20     | 20     | 20     | 20     | 20     | 15     | 15     |
| No. of failures for previous 12 month period                           | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 100.0%      | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | Yes         | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

Annual Report 2017-18  
ECM #238394

| Drinking Water Scheme  | Masig                               |        |        |        |        |       |       |       |       |       |       |       |
|--|-------------------------------------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| Year   | 2017 – 2018                         |        |        |        |        |       |       |       |       |       |       |       |
| Month  | July                                | Aug    | Sept   | Oct    | Nov    | Dec   | Jan   | Feb   | Mar   | Apr   | May   | Jun   |
| No. of samples collected   | 5                                   | 5      | 5      | 5      | 5      | 15    | 5     | 0     | 5     | 5     | 5     | 5     |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0                                   | 0      | 0      | 0      | 0      | 2     | 0     | 0     | 0     | 0     | 0     | 0     |
| No. of samples collected in previous 12 month period                   | 31                                  | 35     | 40     | 40     | 45     | 60    | 65    | 65    | 65    | 65    | 65    | 65    |
| No. of failures for previous 12 month period                           | 0                                   | 0      | 0      | 0      | 0      | 0     | 2     | 2     | 2     | 2     | 2     | 2     |
| % of samples that comply   | 100.0%                              | 100.0% | 100.0% | 100.0% | 100.0% | 96.7% | 96.9% | 96.9% | 96.9% | 96.9% | 96.9% | 96.9% |
| Compliance with 98% annual value                                       | Yes                                 | Yes    | Yes    | Yes    | Yes    | No    | No    | No    | No    | No    | No    | No    |
| Comments   | Refer to DWI-7-500-00067 in Table 4 |        |        |        |        |       |       |       |       |       |       |       |

| Drinking Water Scheme  | Mer   |        |        |        |        |        |        |        |       |       |       |       |
|--|---|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| Year   | 2017 – 2018   |        |        |        |        |        |        |        |       |       |       |       |
| Month  | July  | Aug    | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar   | Apr   | May   | Jun   |
| No. of samples collected   | 5   | 0      | 5      | 5      | 0      | 0      | 10     | 0      | 5     | 5     | 5     | 0     |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1     | 1     | 0     | 0     |
| No. of samples collected in previous 12 month period                   | 23  | 13     | 18     | 20     | 20     | 20     | 30     | 30     | 35    | 40    | 49    | 44    |
| No. of failures for previous 12 month period                           | 0   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 1     | 2     | 2     | 2     |
| % of samples that comply   | 100.0%  | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 97.1% | 95.0% | 95.9% | 95.5% |
| Compliance with 98% annual value                                       | Yes   | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | No    | No    | No    | No    |
| Comments   | Refer to DWI-7-500-00068 and DWI-7-500-00070 in Table 4 |        |        |        |        |        |        |        |       |       |       |       |

Annual Report 2017-18  
ECM #238394

| Drinking Water Scheme  | Poruma      |        |        |        |        |        |        |        |        |        |        |        |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |        |        |        |        |        |        |        |        |        |        |        |
| Month  | July        | Aug    | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 0           | 0      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      | 5      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 35          | 25     | 25     | 20     | 25     | 30     | 35     | 40     | 35     | 40     | 45     | 50     |
| No. of failures for previous 12 month period                           | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 100.0%      | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | Yes         | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

| Drinking Water Scheme  | Saibai                              |       |       |       |       |       |       |       |       |       |       |       |
|--|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Year   | 2017 – 2018                         |       |       |       |       |       |       |       |       |       |       |       |
| Month  | July                                | Aug   | Sept  | Oct   | Nov   | Dec   | Jan   | Feb   | Mar   | Apr   | May   | Jun   |
| No. of samples collected   | 5                                   | 5     | 5     | 15    | 5     | 0     | 0     | 0     | 5     | 5     | 5     | 5     |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0                                   | 0     | 3     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     |
| No. of samples collected in previous 12 month period                   | 59                                  | 55    | 55    | 60    | 60    | 60    | 60    | 55    | 55    | 55    | 55    | 55    |
| No. of failures for previous 12 month period                           | 3                                   | 3     | 6     | 6     | 3     | 3     | 3     | 3     | 3     | 3     | 3     | 3     |
| % of samples that comply   | 94.9%                               | 94.5% | 89.1% | 90.0% | 95.0% | 95.0% | 95.0% | 94.5% | 94.5% | 94.5% | 94.5% | 94.5% |
| Compliance with 98% annual value                                       | No                                  | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    | No    |
| Comments   | Refer to DWI-7-500-00066 in Table 4 |       |       |       |       |       |       |       |       |       |       |       |



Annual Report 2017-18  
ECM #238394

| Drinking Water Scheme  | St Pauls    |        |        |        |        |        |        |        |        |        |        |        |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |        |        |        |        |        |        |        |        |        |        |        |
| Month  | July        | Aug    | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 0           | 5      | 0      | 5      | 5      | 10     | 5      | 0      | 5      | 5      | 0      | 5      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 25          | 30     | 25     | 30     | 35     | 45     | 45     | 45     | 45     | 45     | 40     | 45     |
| No. of failures for previous 12 month period                           | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 100.0%      | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | Yes         | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

| Drinking Water Scheme  | Ugar        |        |        |        |        |        |        |        |        |        |        |        |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |        |        |        |        |        |        |        |        |        |        |        |
| Month  | July        | Aug    | Sept   | Oct    | Nov    | Dec    | Jan    | Feb    | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 0           | 5      | 0      | 5      | 5      | 5      | 0      | 5      | 0      | 0      | 0      | 5      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 18          | 20     | 18     | 20     | 25     | 30     | 30     | 35     | 35     | 35     | 30     | 30     |
| No. of failures for previous 12 month period                           | 0           | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      |
| % of samples that comply   | 100.0%      | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | Yes         | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    | Yes    |

Annual Report 2017-18  
ECM #238394

| Drinking Water Scheme  | Warraber    |       |       |       |       |       |       |       |        |        |        |        |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| Year   | 2017 – 2018 |       |       |       |       |       |       |       |        |        |        |        |
| Month  | July        | Aug   | Sept  | Oct   | Nov   | Dec   | Jan   | Feb   | Mar    | Apr    | May    | Jun    |
| No. of samples collected   | 5           | 5     | 5     | 5     | 5     | 5     | 0     | 5     | 0      | 5      | 5      | 5      |
| No. of samples collected in which E. coli is detected (i.e. a failure) | 0           | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0      | 0      | 0      | 0      |
| No. of samples collected in previous 12 month period                   | 18          | 23    | 28    | 33    | 38    | 43    | 43    | 48    | 43     | 44     | 45     | 50     |
| No. of failures for previous 12 month period                           | 1           | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 0      | 0      | 0      | 0      |
| % of samples that comply   | 94.4%       | 95.7% | 96.4% | 97.0% | 97.4% | 97.7% | 97.7% | 97.9% | 100.0% | 100.0% | 100.0% | 100.0% |
| Compliance with 98% annual value                                       | No          | No    | No    | No    | No    | No    | No    | No    | Yes    | Yes    | Yes    | Yes    |

## 5 Events that Affected Water Quality in 2017-18

Table 4 summarises the drinking water events that occurred during the 2017-18 reporting period. The majority of failures were due to E.coli, which are reflected in Table 3.

**Table 4: Water Quality Failures Reported to Regulator**

| Incident Number | Incident Date | Location        | Parameter Failure / Issue                           | Incident Response Steps   |
|-----------------|---------------|-----------------|---|---|
| DWI-7-500-00064 | 09/08/2017    | Poruma          | Chlorine  | High level chlorine experienced due to fault with new automated dosing. Shandy of supplies undertaken to ensure residual decreased to safe limit. Monitoring of network undertaken  |
| DWI-7-500-00065 | 11/08/2017    | Kubin – Airport | E.coli  | Notified regulator. Spoke with relevant staff and issued a do not drink notice at the airport tap. Believe sample contamination was the issue as only failed at one of five sample points and chlorine levels were good in network. |
| DWI-7-500-00066 | 27/09/2017    | Saibai          | E.coli  | Notified regulator. Flushing and backwash of filter. Increase chlorine dosing and take samples and put BWA in place   |
| DWI-7-500-00067 | 15/12/2017    | Masig           | E.coli  | Masig had connectivity issues and the results of the failure at the school sink and the council were not reported to Council until 1pm Monday 18/12/2017. Resamples taken, boil water notice issued                                 |
| DWI-7-500-00068 | 24/12/2017    | Mer             | Power outage  | THPU and DEHP involved also due to major power outage causing loss of Wastewater treatment plant. Boil water notice put in place as a precaution  |
| DWI-7-500-00069 | 19/01/2018    | Kirriiri        | High turbidity event                                | Boil water notice in place. Project underway to install new filtration system.  |
| DWI-7-500-00070 | 20/01/2018    | Mer             | E.coli  | Boil water notice in place  |
| DWI-7-500-00071 | 17/05/2018    | Kirriiri        | High turbidity and crypto failure in water from TSC | Boil water notice in place. Project underway to install new filtration system. Torres Shire installing new filtration system in December 2018.  |

## 6 Customer Complaints

Complaints are managed in accordance with the TSIRC Complaints Management Procedure. A complaints register has recently been developed to capture any complaints in relation to water. There have been no formally recorded complaints in the 2017/18 reporting period. This is possibly due to a lack of understanding and training in the area for water officers and other council staff.

Training will be developed in the 2018/19 period for water officers on how to handle complaints received from the community, especially verbally, to ensure data is captured. Water & Wastewater is trialling capturing complaint information on the weekly Logsheets submitted by Water Officers in 2019.

**Table 5: Customer Complaints**

| Scheme Name | No. Customer Complaints | Main Reason for Complaint | Response to Complaints |
|-------------|-------------------------|---------------------------|------------------------|
| Badu        | Nil                     | N/A                       | N/A                    |
| Boigu       | Nil                     | N/A                       | N/A                    |
| Dauan       | Nil                     | N/A                       | N/A                    |
| Erub        | Nil                     | N/A                       | N/A                    |
| Iama        | Nil                     | N/A                       | N/A                    |
| Kirriiri    | Nil                     | N/A                       | N/A                    |
| Kubin       | Nil                     | N/A                       | N/A                    |
| Mabuiag     | Nil                     | N/A                       | N/A                    |
| Masig       | Nil                     | N/A                       | N/A                    |
| Mer         | Nil                     | N/A                       | N/A                    |
| Poruma      | Nil                     | N/A                       | N/A                    |
| Saibai      | Nil                     | N/A                       | N/A                    |
| St Pauls    | Nil                     | N/A                       | N/A                    |
| Ugar        | Nil                     | N/A                       | N/A                    |
| Warraber    | Nil                     | N/A                       | N/A                    |

### 6.1 Alleged Illness

Alleged illness complaints are received from customers who believe their water supply is the cause of an illness. In these cases, recent laboratory samples are reviewed to supply information to the customer to reassure the water supply is meeting the Australian Drinking Water guidelines for health related parameters. During 2017-18, there was no confirmed illness due to drinking water supplied to the community.

### 6.2 Colour Complaints

Discoloured water can predominantly be attributed to emergency works being conducted on the water mains in the area. A change in flow direction can cause sediment to be disturbed in the pipe and push this into legs of water meters at resident's properties. While Water and Wastewater endeavour to plan works where possible and deliver letters to residents explaining works, duration of time without water and potential effects such as dirty/milky water after the water is returned to service, emergencies still occur that require urgent attention and cannot be planned.

Water and Wastewater staff advise residents to run external taps to flush any dirty water trapped in their connection and if the water is still discoloured, Water and Wastewater staff return to the area and flush the delivery mains again.

### **6.3 Taste and Odour Complaints**

The taste and odour complaints received are often related to chlorine in the network. Individual customers have very different tolerance levels and while as low as possible, this can be detected by customers with very sensitive taste and smell.

Chlorine can also react with organics in the pipe network, be affected by periods of low flow and also temperature in the pipe network.

Water and Wastewater staff investigate all chlorine complaints and if recent results are not available for that area from daily testing, officers will attend the location and take a chlorine reading using a handheld chlorine meter.

## 7 DWQMP Review Outcomes

A full review of the DWQMP was undertaken during the year and updates were approved by the Regulator on 18 May 2018. The actions and updates resulting from the review are summarised in Table 6.

Table 6: Review Outcomes

| Review component                            | Findings  | Outcomes  | Status of actions         |
|---|---|---|---------------------------|
| Service description                         |   |   |                           |
| Details of infrastructure                   | Updates to schematics and minor details required                          | Required updates made   | Completed in 2018         |
| Water quality and catchment characteristics | Updates for new data. Removal of information where known to be incorrect. | Required updates made   | Completed in 2018         |
| Risk assessment                             | A full review of the DWQMP risk assessment was undertaken                 | A new RMIP was established based on the results of the risk assessment  | Completed in 2017         |
| Operations and maintenance procedures       |   |   |                           |
| Management of incidents and emergencies     | No incident register in place   | An Incident Register has been established   | Completed in 2017         |
| Risk management improvement program (RMIP)  | RMIP required updating to reflect risk assessment                         | A new Risk Management Improvement Program was established based on updated risk assessment and audit outcomes | Completed in October 2018 |
| Service wide information management         | Minor updates required  | Incident management flow chart updated  | Completed in 2018         |
| Operational monitoring                      | Minor updates required  | . SCADA details provided  | Completed in 2018         |
| Verification monitoring                     | Minor updates required  | Updated schedule for testing  | Completed in 2018         |

## 8 DWQMP Audit Findings

The first regular audit of the approved DWQMP was undertaken in June 2018 by Viridis Consultants Pty Ltd. The auditor submitted the audit report to the regulator on 9 July 2018. The purpose of the audit was to:

- Verify the accuracy of data
- Assess compliance with the plan and its conditions
- Assess the relevance of the plan

A summary of the auditor's findings includes:

- One major non-compliance in relation to relevance of the plan
- Four minor non-compliances in relation to verifying the accuracy of data in the annual report, implementing the plan and relevance of the plan
- TSIRC demonstrated that it has made significant progress in establishing processes to improve compliance with the plan and collect and collate water quality monitoring data

The actions undertaken to address the audit recommendations are outlined in Table 7 and are also included as part of the RMIP in Appendix A.

Table 7: DWQMP Audit Findings and Status

| Item Number | Item   | Recommendation or OFI | Solutions Identified  | Solution Status   |
|-------------|--|-----------------------|---|---|
| REC-18-001  | Continue to improve processes for data collection including verification monitoring results, complaints and improvement plan actions.  | Recommendation        | Continue to improve data collection processes.<br><br>Establish formal complaints process for water quality.<br><br>Develop RMIP including priorities   | TSIRC has a general complaints policy which encompasses water quality. Forms sit with DMs to report. To add to water log sheets and A register was developed so water specific complaints can be tracked by W&W.<br><br>RMIP was submitted to the regulator on 11 October 2018. |
| REC-18-002  | Update the DWQMP to identify the actual preventive measures that are relevant to each scheme.  | Recommendation        | To be included in the consolidation of the DWQMPs   | In progress   |
| REC-18-003  | Undertake further training on the requirements for filling out the log sheet to ensure operators are identifying issues, such a lack of spare parts, and communicating them to the organisation.                   | Recommendation        | A water symposium is being conducted in conjunction with Queensland Health where all water operators and technical officers will attend. Relevant details of the DWQMPs will be communicated. | To be addressed at water symposium and through the TSIRC ELearning platform with quarterly assignments and questions for staff to undertake   |
| REC-18-004  | Confirm that preventive measures identified in the plan are being implemented, for example, vermin proofing and locked hatches on treated water storages, cleaning of lagoon covers, first flush of lagoon covers. | Recommendation        | Maintenance checklist to be added to the log sheet for each island.   | To be communicated in monthly DEO meeting when updated log sheets rolled out.<br><br>Log sheet compliance is monitored weekly.  |
| REC-18-005  | Progress establishment of procedures for implementing preventive measures, to ensure that there is a documented standard for their implementation across all schemes.  | Recommendation        | Develop procedure for preventative maintenance to go along with log sheet checklist   |   |



**Annual Report 2017-18**  
**ECM #238394**

| <b>Item Number</b> | <b>Item</b>   | <b>Recommendation or OFI</b> | <b>Solutions Identified</b>  | <b>Solution Status</b>  |
|--------------------|---|------------------------------|--|---|
| REC-18-006         | Revise the critical limits to require operators to undertake a corrective action when the quality of water can no longer be guaranteed, for example, when filtered water turbidity is greater than 0.5 NTU in catchments with a protozoa risk, and when disinfection effectiveness is potentially compromised (when turbidity is greater than 1 NTU). | Recommendation               | Develop a CCP register and procedure for non-compliances                 |   |
| REC-18-007         | Update the St Pauls DWQMP, and subsequent supporting documents, such as the risk assessment and monitoring plans to reflect the sources of water for the drinking water schemes.  | Recommendation               | To be included in the consolidation of the DWQMPs                        | In progress   |
| REC-18-008         | Review all DWQMPs to confirm that the catchment characteristics are documented accurately and all sources of water are included.  | Recommendation               | To be included in the consolidation of the DWQMPs                        | In progress   |
| OFI-18-001         | Encourage on-island staff to document verbal complaints about the water service, for example on the log sheets.   | OFI                          | To be added to the log sheet for each island. A register to be developed | To be communicated in monthly DEO meeting when updated log sheets rolled out.<br><br>TSIRC has a general complaints policy which encompasses water quality. Forms sit with DMs to report. To add to water log sheets and develop a register so water specific complaints can be tracked by W&W. |

**Annual Report 2017-18**  
**ECM #238394**

| <b>Item Number</b> | <b>Item</b>   | <b>Recommendation or OFI</b> | <b>Solutions Identified</b>   | <b>Solution Status</b>  |
|--------------------|---|------------------------------|---|---|
| OFI-18-002         | Consider developing a master list of operational procedures to document the actions that are important in ensuring safe drinking water and prioritise their development based on risk (e.g. procedures for operating critical treatment processes should be developed first).   | OFI                          | A master list of operational procedures to be developed so there is consistency across schemes. Operational procedure manuals to be revised/developed, prioritised based on risk  |   |
| OFI-18-003         | Consider adding calibration to the log sheet  | OFI                          | Add weekly calibration to the log sheet for each island   | Drafted, planned to be rolled-out in time for Water Symposium                                       |
| OFI-18-004         | Consider adding weekly reservoir inspections to the log sheet   | OFI                          | Add weekly reservoir inspections to the log sheet for each island   | Drafted, planned to be rolled-out in time for Water Symposium                                       |
| OFI-18-005         | Encourage operators to regularly watch training videos, to reinforce the procedures and refresh training.   | OFI                          | A water symposium is being conducted in conjunction with Queensland Health where all water operators and technical officers will attend. Staff will be encouraged to regularly watch training videos.   |   |
| OFI-18-006         | Establish a training program or update existing training programs to specifically communicate the relevant details of the DWQMP including: <ul style="list-style-type: none"> <li>• requirements of the DWQMP</li> <li>• details of the risk assessment</li> <li>• legislative requirements</li> <li>• monitoring</li> <li>• incident responses.</li> </ul> | OFI                          | A water symposium is being conducted in conjunction with Queensland Health where all water operators and technical officers will attend. Relevant details of the DWQMPs will be communicated.<br><br>Establish a staff training program run 3-4 times per year. | TSIRC ELearning platform to be used with quarterly assignments and questions for staff to undertake |
| OFI-18-007         | Capture details of non-compliances on the incident notification forms, including details of initial notifications, parameters and values of non-compliance and details of notifications from other water suppliers.   | OFI                          | Develop Incident Register   | Completed. An incident register has been established.   |

**Annual Report 2017-18**  
**ECM #238394**

| <b>Item Number</b> | <b>Item</b>  | <b>Recommendation or OFI</b> | <b>Solutions Identified</b>  | <b>Solution Status</b>   |
|--------------------|--|------------------------------|--|--|
| OFI-18-008         | Establish a procedure or update the IMM to document the action to take when a noncompliance is reported from Torres Shire, or if non-compliance is noted in the Hammond Island network, procedures to notify Torres Shire. | OFI                          | Develop a procedure to notify Torres Shire when non-compliance reported in Hammond and vis-versa. Update in IMM    | This will require some cooperation with Torres Shire   |
| OFI-18-009         | Establish agreed notification and communication procedures to ensure notifications are made and received in a timely manner.   | OFI                          | Update IMM, include timeframes   |  |
| OFI-18-0010        | Establish Quality Assurance and Quality Control standards for in-house testing to confirm the accuracy of in-house results.  | OFI                          | Establish Quality Assurance and Quality Control standards. Discuss options with Cairns Regional Council Laboratory | Funding dependent to roll out additional procedures.   |
| OFI-18-0011        | When the improvement plan is established, include prioritisation based on public health risk, and focus on establishment of a drinking water framework consistent with the ADWG.   | OFI                          | Establish a risk management improvement plan (RMIP) and include priorities.  | Completed. A RMIP has been developed with priorities.  |
| OFI-18-0012        | Correct minor inconsistencies in within documentation.   | OFI                          | To be included in the consolidation of the DWQMPs  | DWQMP is currently being updated   |
| OFI-18-0013        | Develop a process to keep a record of regular reviews (e.g. system assessment, data analysis, risk review and findings)  | OFI                          | Develop a review register and process for implementing it  |  |
| OFI-18-0014        | Establish critical control points and corrective action procedures in line with the ADWG.  | OFI                          | Develop a CCP register and procedure for non-compliances   |  |
| OFI-18-0015        | Consider undertaking a Health Based Treatment Targets assessment of drinking water catchments to confirm that drinking water systems have adequate treatment processes to manage hazards.                                  | OFI                          | A Health Based Treatment Target Assessment will be considered  | A Request for Quotation has been drafted (to be sent in October 2018) for a Health Based Treatment Target Assessment. Scope will be funding dependent. |

## **Appendix A**

### **Risk Management Improvement Plan**



**TSIRC Water & Wastewater  
Risk Management Improvement Plan**

ECM #217801

| <b>Key</b> |   |
|------------|---|
| REC-18-00X | Recommendations from DWQMP Regular Audit Report June 2018               |
| OFI-18-0XX | Opportunities for Improvement from DWQMP Regular Audit Report June 2018 |
| RAM-18-XXX | Action Item from DWQMP Risk Assessment ECM #180710                      |

| Line # | Item #     | Description  | Priority | Scheme   | Action Officer              | Responsible Officer        | Solutions Identified  | Proposed Date to be Completed | Quarterly Comments   | Closed Date |
|--------|------------|--|----------|----------|-----------------------------|----------------------------|---|-------------------------------|--|-------------|
| 4      | REC-18-004 | Confirm that preventive measures identified in the plan are being implemented, for example, vermin proofing and locked hatches on treated water storages, cleaning of lagoon covers, first flush of lagoon covers.         | H        | All      | Engineer Water & Wastewater | Manager Water & Wastewater | Maintenance checklist to be added to the log sheet for each island.   | Jun-19                        | To be communicated in monthly DEO meeting when updated logsheets rolled out.<br><br>Logsheet compliance is monitored weekly.                               |             |
| 6      | REC-18-006 | Revise the critical limits to require operators to undertake a corrective action when the quality of water can no longer be guaranteed, for example,   | H        | All      | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a CCP register and procedure for non-compliances  | Dec-19                        |  |             |
| 16     | OFI-18-008 | Establish a procedure or update the IMM to document the action to take when a noncompliance is reported from Torres Shire, or if non-compliance is noted in the Hammond Island network, procedures to notify Torres Shire. | H        | All      | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a procedure to notify Torres Shire when non-compliance reported in Hammond and vis-versa. Update in IMM | Jun-20                        | This will require some cooperation with Torres Shire   |             |
| 17     | OFI-18-009 | Establish agreed notification and communication procedures to ensure notifications are made and received in a timely manner.   | H        | All      | Engineer Water & Wastewater | Manager Water & Wastewater | Update IMM, include timeframes  | Jun-20                        |  |             |
| 22     | OFI-18-014 | Establish critical control points and corrective action procedures in line with the ADWG.  | H        | All      | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a CCP register and procedure for non-compliances  | Jun-19                        |  |             |
| 23     | OFI-18-015 | Consider undertaking a Health Based Treatment Targets assessment of drinking water catchments to confirm that drinking water systems have adequate treatment processes to manage hazards.                                  | H        | All      | Manager Water & Wastewater  | Manager Water & Wastewater | A Health Based Treatment Target Assessment will be considered   | Jun-20                        | A Request for Quotation has been drafted (to be sent out in October 2018) for a Health Based Treatment Target Assessment. Scope will be funding dependent. |             |
| 5      | REC-18-005 | Progress establishment of procedures for implementing preventive measures, to ensure that there is a documented standard for their implementation across all schemes.  | L        | All      | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for preventative maintenance to go along with log sheet checklist                             | Jun-19                        |  |             |
| 7      | REC-18-007 | Update the St Pauls DWQMP, and subsequent supporting documents, such as the risk assessment and monitoring plans to reflect the sources of water for the drinking water schemes.   | L        | St Pauls | Engineer Water & Wastewater | Manager Water & Wastewater | To be included in the consolidation of the DWQMPs   | Jun-19                        | In progress  |             |
| 8      | REC-18-008 | Review all DWQMPs to confirm that the catchment characteristics are documented accurately and all sources of water are included.   | L        | All      | Engineer Water & Wastewater | Manager Water & Wastewater | To be included in the consolidation of the DWQMPs   | Jun-19                        | In progress  |             |

|     |            |  |   |          |                             |                            |  |        |  |        |
|-----|------------|--|---|----------|-----------------------------|----------------------------|--|--------|--|--------|
| 19  | OFI-18-011 | When the improvement plan is established, include prioritisation based on public health risk, and focus on establishment of a drinking water framework consistent with the ADWG. | L | All      | Engineer Water & Wastewater | Manager Water & Wastewater | Establish a risk management improvement plan (RMIP) and include priorities.      | Oct-18 | <a href="#">Refer REC-18-001</a>   |        |
| 20  | OFI-18-012 | Correct minor inconsistencies in within documentation.   | L | All      | Engineer Water & Wastewater | Manager Water & Wastewater | To be included in the consolidation of the DWQMPs                                | Dec-19 | In progress  |        |
| 21  | OFI-18-013 | Develop a process to keep a record of regular reviews (e.g. system assessment, data analysis, risk review and findings)  | L | All      | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a review register and process for implementing it                        | Jun-20 |  |        |
| 36  | RAM-18-013 | Install fencing around wells   | L | Ugar     | Engineer Water & Wastewater | Manager Water & Wastewater | Install fencing around wells   | Jun-20 | Securing of wells will be included in ICCIP project  |        |
| 38  | RAM-18-015 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | L | Hammond  | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets                      | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 39  | RAM-18-016 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | L | Kubin    | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets                      | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 43  | RAM-18-020 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | L | Poruma   | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets                      | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 45  | RAM-18-022 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | L | St Pauls | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets                      | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 50  | RAM-18-027 | Add chlorine stock solution records to daily log to confirm appropriate usage  | L | Hammond  | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock                                   | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 51  | RAM-18-028 | Add chlorine stock solution records to daily log to confirm appropriate usage  | L | Kubin    | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock                                   | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 55  | RAM-18-032 | Add chlorine stock solution records to daily log to confirm appropriate usage  | L | Poruma   | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock                                   | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 57  | RAM-18-034 | Add chlorine stock solution records to daily log to confirm appropriate usage  | L | St Pauls | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock                                   | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 71  | RAM-18-048 | Develop better complaints recording processes  | L | Hammond  | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.                           | Jun-19 | Refer REC-18-001   |        |
| 72  | RAM-18-049 | Develop better complaints recording processes  | L | Kubin    | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.                           | Jun-19 | Refer REC-18-001   |        |
| 76  | RAM-18-053 | Develop better complaints recording processes  | L | Poruma   | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.                           | Jun-19 | Refer REC-18-001   |        |
| 78  | RAM-18-055 | Develop better complaints recording processes  | L | St Pauls | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.                           | Jun-19 | Refer REC-18-001   |        |
| 114 | RAM-18-091 | Develop maintenance schedule for sandfilter  | L | Badu     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop maintenance schedule and update logsheet set accordingly. Staff training | Jun-21 | Part of WTP upgrades under ICCIP package. Design commenced Oct 2018  |        |
| 115 | RAM-18-092 | Upgrades to aeration system  | L | Badu     | Engineer Water & Wastewater | Manager Water & Wastewater | Upgrade aeration system  | Jun-21 | Part of WTP upgrades under ICCIP package. Design commenced Oct 2018  |        |
| 116 | RAM-18-093 | Upgrade SCADA monitoring to include pH & turbidity   | L | Badu     | Engineer Water & Wastewater | Manager Water & Wastewater | Upgrade SCADA monitoring to include pH & turbidity                               | Jun-21 | Part of WTP upgrades under ICCIP package. Design commenced Oct 2018  |        |
| 137 | RAM-18-114 | Daily raw and clear water conductivity testing   | L | Boigu    | Engineer Water & Wastewater | Manager Water & Wastewater | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed.   | Jun-17 |

|     |            |   |   |          |                                |                                |  |        |  |        |
|-----|------------|---|---|----------|--------------------------------|--------------------------------|--|--------|--|--------|
| 138 | RAM-18-115 | Daily raw and clear water conductivity testing                | L | Poruma   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed. | Jun-17 |
| 139 | RAM-18-116 | Daily raw and clear water conductivity testing                | L | Warraber | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed. | Jun-17 |
| 140 | RAM-18-117 | Daily raw and clear water turbidity testing                   | L | Boigu    | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed. | Jun-17 |
| 141 | RAM-18-118 | Daily raw and clear water turbidity testing                   | L | Poruma   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed. | Jun-17 |
| 142 | RAM-18-119 | Daily raw and clear water turbidity testing                   | L | Warraber | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed. | Jun-17 |
| 143 | RAM-18-120 | Daily raw water turbidity testing                             | L | Iama     | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed. | Jun-17 |
| 144 | RAM-18-121 | Daily raw water turbidity testing                             | L | Mer      | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed. | Jun-17 |
| 145 | RAM-18-122 | Daily raw water turbidity testing                             | L | Ugar     | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install sample points and undertake staff training. Update logsheets accordingly | Jun-20 | Logsheets updated. Logsheets assessments conducted weekly to ensure compliance. Sample points installed. | Jun-17 |
| 146 | RAM-18-123 | Recommission Well 3 and use existing media filter duel system | L | Hammond  | Engineer Water & Wastewater    | Manager Water & Wastewater     | Recommission Well 3 and use existing media filter duel system                    | Jun-20 | Well 3 will be recommissioned in W4Q and ICCIP projects  |        |
| 147 | RAM-18-124 | Install online turbidity meter intergated to SCADA            | L | Hammond  | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install online turbidity meter intergated to SCADA                               | Jun-19 | Project in scoping phase. W4Q2 funding   |        |
| 148 | RAM-18-125 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Badu     | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 149 | RAM-18-126 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Boigu    | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 150 | RAM-18-127 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Dauan    | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 152 | RAM-18-129 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Iama     | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 153 | RAM-18-130 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Kubin    | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 154 | RAM-18-131 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Mabuiag  | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 155 | RAM-18-132 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Masig    | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 157 | RAM-18-134 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Poruma   | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 158 | RAM-18-135 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | St Pauls | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 159 | RAM-18-136 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Ugar     | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 160 | RAM-18-137 | Water Quality Sampling of raw water 6 monthly for E.Coli      | L | Warraber | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP                        | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 161 | RAM-18-138 | Spill Kit/Absorption kit located at WTP                       | L | Boigu    | Divisional Engineering Officer | Manager Engineering Operations | Ensure Spill Kit/Absorption kit located at WTP                                   | Jun-19 | Spill/absorption kit ordered for WTP   |        |

|     |            |  |   |          |                                |                                |   |        |  |  |
|-----|------------|--|---|----------|--------------------------------|--------------------------------|---|--------|--|--|
| 162 | RAM-18-139 | Spill Kit/Absorption kit located at WTP  | L | Iama     | Divisional Engineering Officer | Manager Engineering Operations | Ensure Spill Kit/Absorption kit located at WTP  | Jun-19 | Spill/absorption kit ordered for WTP   |  |
| 164 | RAM-18-141 | Spill Kit/Absorption kit located at WTP  | L | Ugar     | Divisional Engineering Officer | Manager Engineering Operations | Ensure Spill Kit/Absorption kit located at WTP  | Jun-19 | Spill/absorption kit ordered for WTP   |  |
| 165 | RAM-18-142 | Propose seawall upgrade to minimise possibility of contamination and protect raw pump station.   | L | Boigu    | Engineer Water & Wastewater    | Manager Water & Wastewater     | Determine need and funding from QCoast 2100 Coastal Hazard Adaptation Study (CHAS).   | Jun-20 | Phase 1 & 2 (of 7) of CHAS completed, next phase of study to be put forward for next round of funding.   |  |
| 166 | RAM-18-143 | Propose seawall upgrade to minimise possibility of contamination and protect raw pump station.   | L | Iama     | Engineer Water & Wastewater    | Manager Water & Wastewater     | Determine need and funding from QCoast 2100 Coastal Hazard Adaptation Study (CHAS).   | Jun-20 | Phase 1 & 2 (of 7) of CHAS completed, next phase of study to be put forward for next round of funding.   |  |
| 167 | RAM-18-144 | Propose seawall upgrade to minimise possibility of contamination and protect raw pump station.   | L | Masig    | Engineer Water & Wastewater    | Manager Water & Wastewater     | Determine need and funding from QCoast 2100 Coastal Hazard Adaptation Study (CHAS).   | Jun-20 | Phase 1 & 2 (of 7) of CHAS completed, next phase of study to be put forward for next round of funding.   |  |
| 169 | RAM-18-146 | Propose seawall upgrade to minimise possibility of contamination and protect raw pump station.   | L | Poruma   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Determine need and funding from QCoast 2100 Coastal Hazard Adaptation Study (CHAS).   | Jun-20 | Phase 1 & 2 (of 7) of CHAS completed, next phase of study to be put forward for next round of funding. Sand bag wall being installed as a interim measure  |  |
| 170 | RAM-18-147 | Propose seawall upgrade to minimise possibility of contamination and protect raw pump station.   | L | Ugar     | Engineer Water & Wastewater    | Manager Water & Wastewater     | Determine need and funding from QCoast 2100 Coastal Hazard Adaptation Study (CHAS).   | Jun-20 | Phase 1 & 2 (of 7) of CHAS completed, next phase of study to be put forward for next round of funding.   |  |
| 171 | RAM-18-148 | Propose seawall upgrade to minimise possibility of contamination and protect raw pump station.   | L | Warraber | Engineer Water & Wastewater    | Manager Water & Wastewater     | Determine need and funding from QCoast 2100 Coastal Hazard Adaptation Study (CHAS).   | Jun-20 | Phase 1 & 2 (of 7) of CHAS completed, next phase of study to be put forward for next round of funding.   |  |
| 31  | RAM-18-008 | Install fencing around wells   | L | Badu     | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install fencing around wells  | Jun-20 | Fencing included as a project in the ICCIP program for undertaking by TSIRC Civil crew in 2019   |  |
| 32  | RAM-18-009 | Install fencing around wells   | L | Dauan    | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install fencing around wells  | Jun-20 | Investigate cost and use of TSIRC civil crew to undertake fencing  |  |
| 33  | RAM-18-010 | Install fencing around wells   | L | Kubin    | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install fencing around wells  | Jun-20 | Investigate cost and use of TSIRC civil crew to undertake fencing  |  |
| 34  | RAM-18-011 | Install fencing around wells   | L | Mabuiag  | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install fencing around wells  | Jun-20 | Investigate cost and use of TSIRC civil crew to undertake fencing  |  |
| 35  | RAM-18-012 | Install fencing around wells   | L | St Pauls | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install fencing around wells  | Jun-20 | Investigate cost and use of TSIRC civil crew to undertake fencing  |  |
| 1   | REC-18-001 | Continue to improve processes for data collection including verification monitoring results, complaints and improvement plan actions.  | M | All      | Engineer Water & Wastewater    | Manager Water & Wastewater     | Continue to improve data collection processes.<br><br>Establish formal complaints process for water quality.<br><br>Develop RMIP including priorities (refer OFI-18-011)                      | Jun-19 | TSIRC has a general complaints policy which encompasses water quality. Forms sit with DMs to report. To add to water log sheets and develop a register so water specific complaints can be tracked by W&W.<br><br>This RMIP is to be submitted by 31 October 2018. |  |
| 2   | REC-18-002 | Update the DWQMP to identify the actual preventive measures that are relevant to each scheme.  | M | All      | Engineer Water & Wastewater    | Manager Water & Wastewater     | To be included in the consolidation of the DWQMPs   | Jun-19 | In progress  |  |
| 3   | REC-18-003 | Undertake further training on the requirements for filling out the log sheet to ensure operators are identifying issues, such a lack of spare parts, and communicating them to the organisation. | M | All      | Manager Water & Wastewater     | Manager Water & Wastewater     | A water symposium is being conducted in conjunction with Queensland Health where all water operators and technical officers will attend. Relevant details of the DWQMPs will be communicated. | Oct-18 | To be addressed at water symposium and through the TSIRC Elearning platform with quarterly assignments and questions for staff to undertake  |  |



|    |            |  |   |     |                                      |                            |   |        |  |        |
|----|------------|--|---|-----|--------------------------------------|----------------------------|---|--------|--|--------|
| 9  | OFI-18-001 | Encourage on-island staff to document verbal complaints about the water service, for example on the log sheets.  | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | To be added to the log sheet for each island. A register to be developed  | Jun-19 | To be communicated in monthly DEO meeting when updated logsheets rolled out.<br><br>TSIRC has a general complaints policy which encompasses water quality. Forms sit with DMs to report. To add to water log sheets and develop a register so water specific complaints can be tracked by W&W. |        |
| 10 | OFI-18-002 | Consider developing a master list of operational procedures to document the actions that are important in ensuring safe drinking water and prioritise their development based on risk (e.g. procedures for operating critical treatment processes should be developed first).        | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | A master list of operational procedures to be developed so there is consistency across schemes. Operational procedure manuals to be revised/developed, prioritised based on risk  | Dec-19 |  |        |
| 11 | OFI-18-003 | Consider adding calibration to the log sheet   | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | Add weekly calibration to the log sheet for each island   | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 12 | OFI-18-004 | Consider adding weekly reservoir inspections to the log sheet  | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | Add weekly reservoir inspections to the log sheet for each island   | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 13 | OFI-18-005 | Encourage operators to regularly watch training videos, to reinforce the procedures and refresh training.  | M | All | Manager Water & Wastewater           | Manager Water & Wastewater | A water symposium is being conducted in conjunction with Queensland Health where all water operators and technical officers will attend. Staff will be encouraged to regularly watch training videos.   | Oct-18 |  |        |
| 14 | OFI-18-006 | Establish a training program or update existing training programs to specifically communicate the relevant details of the DWQMP including:<br>• requirements of the DWQMP<br>• details of the risk assessment<br>• legislative requirements<br>• monitoring<br>• incident responses. | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | A water symposium is being conducted in conjunction with Queensland Health where all water operators and technical officers will attend. Relevant details of the DWQMPs will be communicated.<br><br>Establish a staff training program run 3-4 times per year. | Jun-20 | TSIRC ELearning platform to be used with quarterly assignments and questions for staff to undertake  |        |
| 15 | OFI-18-007 | Capture details of non-compliances on the incident notification forms, including details of initial notifications, parameters and values of non-compliance and details of notifications from other water suppliers.  | M | All | Manager Water & Wastewater           | Manager Water & Wastewater | Develop Incident Register   | Jun-19 | An incident register has been established.   | Dec-17 |
| 18 | OFI-18-010 | Establish Quality Assurance and Quality Control standards for in-house testing to confirm the accuracy of in-house results.  | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | Establish Quality Assurance and Quality Control standards. Discuss options with CRC Laboratory  | Jun-20 | Funding dependent to roll out additional procedures.   |        |
| 24 | RAM-18-001 | Develop procedures for mains break including flushing and follow up samples  | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | Develop procedures for mains break including flushing and follow up samples   | Jun-20 |  |        |
| 25 | RAM-18-002 | Develop procedure for reservoir integrity checks and preventative maintenance scheduling for cleaning  | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | Develop procedure for reservoir integrity checks and preventative maintenance scheduling for cleaning. Refer OFI-18-002.  | Jun-19 | Reservoir integrity checklist drafted  |        |
| 26 | RAM-18-003 | Provide updated contact listing for DEO's and Water Officers   | M | All | Administration Officer - Engineering | Manager Water & Wastewater | Update Engineering Directory with water officers  | Dec-18 |  | Jun-18 |
| 27 | RAM-18-004 | Document process for transport of emergency desal units and timing for this.   | M | All | Engineer Water & Wastewater          | Manager Water & Wastewater | Document process for transport of emergency desal units and timing  | Jun-19 |  |        |

|    |            |  |   |          |                             |                            |   |        |  |        |
|----|------------|--|---|----------|-----------------------------|----------------------------|---|--------|--|--------|
| 28 | RAM-18-005 | Develop a training package for staff to reference. Continue to extend TPHU training for Safe and Healthy Drinking Water Training | M | All      | Engineer Water & Wastewater | Manager Water & Wastewater | <a href="#">Refer to OFI-18-006</a>                         | Jun-20 | <a href="#">Refer to OFI-18-006</a>  |        |
| 29 | RAM-18-006 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Badu     | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 30 | RAM-18-007 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Boigu    | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 37 | RAM-18-014 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Dauan    | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 40 | RAM-18-017 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Mabuiag  | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 41 | RAM-18-018 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Masig    | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 42 | RAM-18-019 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Mer      | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 44 | RAM-18-021 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Saibai   | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 46 | RAM-18-023 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Ugar     | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 47 | RAM-18-024 | Confirm target residual levels ex WTP and responses are clear in the operator's manual   | M | Warraber | Engineer Water & Wastewater | Manager Water & Wastewater | Include target chlorine residual levels on weekly logsheets | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 48 | RAM-18-025 | Add chlorine stock solution records to daily log to confirm appropriate usage  | M | Badu     | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock              | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 49 | RAM-18-026 | Add chlorine stock solution records to daily log to confirm appropriate usage  | M | Dauan    | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock              | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 52 | RAM-18-029 | Add chlorine stock solution records to daily log to confirm appropriate usage  | M | Mabuiag  | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock              | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 53 | RAM-18-030 | Add chlorine stock solution records to daily log to confirm appropriate usage  | M | Masig    | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock              | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 54 | RAM-18-031 | Add chlorine stock solution records to daily log to confirm appropriate usage  | M | Mer      | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock              | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 56 | RAM-18-033 | Add chlorine stock solution records to daily log to confirm appropriate usage  | M | Saibai   | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock              | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 58 | RAM-18-035 | Add chlorine stock solution records to daily log to confirm appropriate usage  | M | Ugar     | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock              | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |

|    |            |  |   |          |                             |                            |   |        |  |        |
|----|------------|--|---|----------|-----------------------------|----------------------------|---|--------|--|--------|
| 59 | RAM-18-036 | Add chlorine stock solution records to daily log to confirm appropriate usage        | M | Warraber | Engineer Water & Wastewater | Manager Water & Wastewater | Update log sheet set to include chlorine stock  | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 60 | RAM-18-037 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Badu     | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-20 | Tender awarded. Scheduled for upgrade in 2019  |        |
| 61 | RAM-18-038 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Boigu    | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-20 | Installed  | May-18 |
| 62 | RAM-18-039 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Dauan    | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-20 | Scheduled for upgrade in 2019  |        |
| 63 | RAM-18-040 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Mabuiag  | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-19 | Installation scheduled for Oct 2018  |        |
| 64 | RAM-18-041 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Masig    | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-20 | Tender awarded. Scheduled for upgrade in 2019  |        |
| 65 | RAM-18-042 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Mer      | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-20 |  |        |
| 66 | RAM-18-043 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Saibai   | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-20 | Installed  | May-18 |
| 67 | RAM-18-044 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Ugar     | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-20 | Tender awarded. Scheduled for upgrade in 2019  |        |
| 68 | RAM-18-045 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA | M | Warraber | Engineer Water & Wastewater | Manager Water & Wastewater | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA  | Jun-20 | Installed  | May-17 |
| 69 | RAM-18-046 | Develop better complaints recording processes  | M | Badu     | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 70 | RAM-18-047 | Develop better complaints recording processes  | M | Dauan    | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 73 | RAM-18-050 | Develop better complaints recording processes  | M | Mabuiag  | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 74 | RAM-18-051 | Develop better complaints recording processes  | M | Masig    | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 75 | RAM-18-052 | Develop better complaints recording processes  | M | Mer      | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 77 | RAM-18-054 | Develop better complaints recording processes  | M | Saibai   | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 79 | RAM-18-056 | Develop better complaints recording processes  | M | Ugar     | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 80 | RAM-18-057 | Develop better complaints recording processes  | M | Warraber | Engineer Water & Wastewater | Manager Water & Wastewater | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 81 | RAM-18-058 | Develop a process for backwashing on differential pressure and time limit            | M | Dauan    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |        |
| 82 | RAM-18-059 | Develop a process for backwashing on differential pressure and time limit            | M | Kubin    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |        |

|    |            |   |   |          |                             |                            |   |        |  |  |
|----|------------|---|---|----------|-----------------------------|----------------------------|---|--------|--|--|
| 83 | RAM-18-060 | Develop a process for backwashing on differential pressure and time limit | M | Mabuiag  | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |  |
| 84 | RAM-18-061 | Develop a process for backwashing on differential pressure and time limit | M | Masig    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |  |
| 85 | RAM-18-062 | Develop a process for backwashing on differential pressure and time limit | M | Mer      | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |  |
| 86 | RAM-18-063 | Develop a process for backwashing on differential pressure and time limit | M | Saibai   | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |  |
| 87 | RAM-18-064 | Develop a process for backwashing on differential pressure and time limit | M | St Pauls | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |  |
| 88 | RAM-18-065 | Develop a process for backwashing on differential pressure and time limit | M | Ugar     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |  |
| 89 | RAM-18-066 | Develop a process for backwashing on differential pressure and time limit | M | Warraber | Engineer Water & Wastewater | Manager Water & Wastewater | Develop a process for backwashing on differential pressure and time limit. Include on log sheet maintenance checklist. Staff training | Jun-20 | Refer REC-18-004, REC-18-005.<br><br>Some schemes have a documented process for backwashing based on time. |  |
| 90 | RAM-18-067 | Develop procedure for lagoon cover cleaning                               | M | Boigu    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004                             | Jun-20 | Refer REC-18-004   |  |
| 91 | RAM-18-068 | Develop procedure for lagoon cover cleaning                               | M | Dauan    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004                             | Jun-20 | Refer REC-18-004   |  |
| 92 | RAM-18-069 | Develop procedure for lagoon cover cleaning                               | M | Erub     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004                             | Jun-20 | Refer REC-18-004   |  |
| 93 | RAM-18-070 | Develop procedure for lagoon cover cleaning                               | M | Kubin    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004                             | Jun-20 | Refer REC-18-004   |  |
| 94 | RAM-18-071 | Develop procedure for lagoon cover cleaning                               | M | Mabuiag  | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004                             | Jun-20 | Refer REC-18-004   |  |
| 95 | RAM-18-072 | Develop procedure for lagoon cover cleaning                               | M | Masig    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004                             | Jun-20 | Refer REC-18-004   |  |
| 96 | RAM-18-073 | Develop procedure for lagoon cover cleaning                               | M | Mer      | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004                             | Jun-20 | Refer REC-18-004   |  |
| 97 | RAM-18-074 | Develop procedure for lagoon cover cleaning                               | M | Poruma   | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004                             | Jun-20 | Refer REC-18-004   |  |

|     |            |   |   |          |                             |                            |   |        |   |  |
|-----|------------|---|---|----------|-----------------------------|----------------------------|---|--------|---|--|
| 98  | RAM-18-075 | Develop procedure for lagoon cover cleaning                       | M | Saibai   | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004 | Jun-20 | Refer REC-18-004                                    |  |
| 99  | RAM-18-076 | Develop procedure for lagoon cover cleaning                       | M | St Pauls | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004 | Jun-20 | Refer REC-18-004                                    |  |
| 100 | RAM-18-077 | Develop procedure for lagoon cover cleaning                       | M | Ugar     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004 | Jun-20 | Refer REC-18-004                                    |  |
| 101 | RAM-18-078 | Develop procedure for lagoon cover cleaning                       | M | Warraber | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for lagoon cover cleaning. Include on log sheet maintenance checklist, refer REC-18-004 | Jun-20 | Refer REC-18-004                                    |  |
| 102 | RAM-18-079 | Develop procedure for first flush water pump out of lagoon covers | M | Boigu    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 103 | RAM-18-080 | Develop procedure for first flush water pump out of lagoon covers | M | Dauan    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 104 | RAM-18-081 | Develop procedure for first flush water pump out of lagoon covers | M | Erub     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 105 | RAM-18-082 | Develop procedure for first flush water pump out of lagoon covers | M | Kubin    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 106 | RAM-18-083 | Develop procedure for first flush water pump out of lagoon covers | M | Mabuiag  | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 107 | RAM-18-084 | Develop procedure for first flush water pump out of lagoon covers | M | Masig    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 108 | RAM-18-085 | Develop procedure for first flush water pump out of lagoon covers | M | Mer      | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 109 | RAM-18-086 | Develop procedure for first flush water pump out of lagoon covers | M | Poruma   | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 110 | RAM-18-087 | Develop procedure for first flush water pump out of lagoon covers | M | Saibai   | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 111 | RAM-18-088 | Develop procedure for first flush water pump out of lagoon covers | M | St Pauls | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 112 | RAM-18-089 | Develop procedure for first flush water pump out of lagoon covers | M | Ugar     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 113 | RAM-18-090 | Develop procedure for first flush water pump out of lagoon covers | M | Warraber | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for first flush water pump out of lagoon covers   | Jun-20 | Refer REC-18-004                                    |  |
| 117 | RAM-18-094 | Develop maintenance schedule                                      | M | Erub     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop maintenance schedule and update logsheet set accordingly. Staff training                          | Jun-20 |   |  |
| 118 | RAM-18-095 | Procedure for backwashing and desludging                          | M | Erub     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for backwashing and desludging, include on log sheet maintenance checklist              | Jun-21 | Part of design and construction under ICCIP         |  |
| 119 | RAM-18-096 | Upgrade SCADA for turbidity monitoring and automated floc dosing  | M | Erub     | Engineer Water & Wastewater | Manager Water & Wastewater | Upgrade SCADA for turbidity monitoring and automated floc dosing  | Jun-21 | Part of design and construction under ICCIP and W4Q |  |
| 120 | RAM-18-097 | Develop maintenance schedule                                      | M | Boigu    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop maintenance schedule and update logsheet set accordingly. Staff training                          | Jun-20 |   |  |
| 121 | RAM-18-098 | Develop maintenance schedule                                      | M | Iama     | Engineer Water & Wastewater | Manager Water & Wastewater | Develop maintenance schedule and update logsheet set accordingly. Staff training                          | Jun-20 |   |  |
| 122 | RAM-18-099 | Develop maintenance schedule                                      | M | Poruma   | Engineer Water & Wastewater | Manager Water & Wastewater | Develop maintenance schedule and update logsheet set accordingly. Staff training                          | Jun-20 |   |  |
| 123 | RAM-18-100 | Procedure for changing of filters and backwashing                 | M | Boigu    | Engineer Water & Wastewater | Manager Water & Wastewater | Develop procedure for changing of filters and backwashing, include on log sheet maintenance checklist     | Jun-20 | Refer REC-18-004, REC-18-005.                       |  |

|     |            |  |   |        |                                |                                |   |        |  |        |
|-----|------------|--|---|--------|--------------------------------|--------------------------------|---|--------|--|--------|
| 124 | RAM-18-101 | Procedure for changing of filters and backwashing  | M | Iama   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Develop procedure for changing of filters and backwashing, include on log sheet maintenance checklist | Jun-20 | Refer REC-18-004, REC-18-005.  |        |
| 125 | RAM-18-102 | Procedure for changing of filters and backwashing  | M | Poruma | Engineer Water & Wastewater    | Manager Water & Wastewater     | Develop procedure for changing of filters and backwashing, include on log sheet maintenance checklist | Jun-20 | Refer REC-18-004, REC-18-005.  |        |
| 126 | RAM-18-103 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA.          | M | Iama   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA                  | Jun-20 | Installation scheduled for October 2018  |        |
| 127 | RAM-18-104 | Confirm target residual levels ex WTP and responses are clear in the operator's manual         | M | Iama   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Include target chlorine residual levels on weekly logsheets   | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 128 | RAM-18-105 | Add chlorine stock solution records to daily log to confirm appropriate usage.                 | M | Boigu  | Engineer Water & Wastewater    | Manager Water & Wastewater     | Update log sheet set to include chlorine stock  | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 129 | RAM-18-106 | Add chlorine stock solution records to daily log to confirm appropriate usage.                 | M | Iama   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Update log sheet set to include chlorine stock  | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 130 | RAM-18-107 | Develop better complaints recording processes  | M | Boigu  | Engineer Water & Wastewater    | Manager Water & Wastewater     | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 131 | RAM-18-108 | Develop better complaints recording processes  | M | Iama   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 132 | RAM-18-109 | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA.          | M | Erub   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Install automated duty/standby chlorine dosing and monitoring system linked to SCADA                  | Jun-20 | Installed  | May-17 |
| 133 | RAM-18-110 | Confirm target residual levels ex WTP and responses are clear in the operator's manual         | M | Erub   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Include target chlorine residual levels on weekly logsheets   | Jun-19 | Target chlorine residual levels are included on daily logsheets, along with turbidity, pH and conductivity limits. Compliance of logsheet completion monitored weekly. | Jun-17 |
| 134 | RAM-18-111 | Add chlorine stock solution records to daily log to confirm appropriate usage.                 | M | Erub   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Update log sheet set to include chlorine stock  | Jun-19 | Drafted, planned to be rolled-out in time for Water Symposium  |        |
| 135 | RAM-18-112 | Develop better complaints recording processes  | M | Erub   | Engineer Water & Wastewater    | Manager Water & Wastewater     | Establish formal complaints process for water quality.  | Jun-19 | Refer REC-18-001   |        |
| 136 | RAM-18-113 | Operator training – Water Ops Certification  | M | Erub   | Training & Development Officer | Manager Water & Wastewater     | Operator training is done if requested and funding available. Covered in performance appraisals.      | Jun-20 | Planning and scheduling of training occurs as part of HR training function   |        |
| 151 | RAM-18-128 | Water Quality Sampling of raw water 6 monthly for E.Coli                                       | M | Erub   | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP   | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 156 | RAM-18-133 | Water Quality Sampling of raw water 6 monthly for E.Coli                                       | M | Mer    | Manager Water & Wastewater     | Manager Water & Wastewater     | Add to Cairns lab schedule for sampling, include in DWQMP   | Jun-19 | Included on Cairns Lab schedule  | Sep-18 |
| 163 | RAM-18-140 | Spill Kit/Absorption kit located at WTP  | M | Mer    | Divisional Engineering Officer | Manager Engineering Operations | Ensure Spill Kit/Absorption kit located at WTP  | Jun-19 | Spill/absorption kit ordered for WTP   |        |
| 168 | RAM-18-145 | Propose seawall upgrade to minimise possibility of contamination and protect raw pump station. | M | Mer    | Engineer Water & Wastewater    | Manager Water & Wastewater     | Determine need and funding from QCoast 2100 Coastal Hazard Adaptation Study (CHAS).                   | Jun-20 | Phase 1 & 2 (of 7) of CHAS completed, next phase of study to be put forward for next round of funding.   |        |

## Appendix B

### Sampling Compliance Results 2017-18

| Location        | Sampling Compliance        |                           |   |                                   |                      |  |
|-----------------|----------------------------|---------------------------|---|-----------------------------------|----------------------|--|
|                 | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail) | Comments   |
| <b>Date:</b>    | <b>Sep-17</b>              |                           |   |                                   |                      |  |
| <b>Badu</b>     | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Boigu</b>    | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Dauan</b>    | Yes                        | Yes                       |   |                                   |                      | No Samples sent; explanation not provided.                           |
| <b>Erub</b>     |                            |                           |   |                                   |                      | No Samples sent; explanation not provided.                           |
| <b>Hammond</b>  | Yes                        | Yes                       |   | Yes                               | Pass                 | Samples taken 5/9/17; received at Cairns lab 5/9/17                  |
| <b>lama</b>     | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Kubin</b>    | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Mabuiag</b>  | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Masig</b>    | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Mer</b>      | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Poruma</b>   | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Saibai</b>   | Yes                        | Yes                       |   | Yes                               | Fail                 | Spare sample bottles & eskies arranged in preparation for resampling |
| <b>St Pauls</b> | Yes                        | Yes                       |   |                                   |                      | No Samples sent; explanation not provided.                           |
| <b>Ugar</b>     | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Warraber</b> | Yes                        | Yes                       |   | Yes                               | Pass                 | In House Testing@ lama   |
| <b>Date:</b>    | <b>Oct-17</b>              |                           |   |                                   |                      |  |
| <b>Badu</b>     | Yes                        | Yes                       | 10/10/2017                                    | Yes                               | Pass                 |  |

Annual Report 2017-18  
ECM #238394

| Location     | Sampling Compliance        |                           |   |                                   |                      |   |
|--------------|----------------------------|---------------------------|---|-----------------------------------|----------------------|---|
|              | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail) | Comments  |
| Boigu        | Yes                        | Yes                       | 10/10/2017                                    | Yes                               | Pass                 | Samples tested In-House (Iama) 11/10/17   |
| Dauan        | Yes                        | Yes                       | 5/10/2017                                     | Yes                               | Pass                 | Samples tested In-House (Iama) 6/10/2017  |
| Erub         |                            |                           |   |                                   |                      | October Sample to be collected & delivered by Manager Water & Wastewater 26/10/17 |
| Hammond      | Yes                        | Yes                       | 3/10/2017                                     | Yes                               | Pass                 |   |
| Iama         | Yes                        | NO                        |   | Yes                               | Pass                 | Samples scheduled for W/E 27th Oct 2017. Samples tested In-House (Iama) 28/10/17  |
| Kubin        | Yes                        | Yes                       | 10/10/2017                                    | Yes                               | Pass                 |   |
| Mabuiag      | Yes                        | Yes                       |   |                                   |                      | Esky was scheduled for 10/10/2017- Esky did not travel; rescheduled for 23/10/17  |
| Masig        | Yes                        | Yes                       | 9/10/2017                                     | Yes                               | Pass                 | Samples tested In-House (Iama) 10/10/17   |
| Mer          | Yes                        | Yes                       | 9/10/2017                                     | Yes                               | Pass                 | Samples Tested In-House (Iama) 10/10/17   |
| Poruma       | Yes                        | Yes                       | 9/10/2017                                     | Yes                               | Pass                 | Samples tested In-House (Iama) 10/10/17   |
| Saibai       | Yes                        | Yes                       | 5/10/2017                                     | Yes                               | Pass                 | Sample tested In-House 6/10/2017. 3rd sample received at Cairns lab -13/10/17     |
| St Pauls     | Yes                        | Yes                       | 10/10/2017                                    | Yes                               | Pass                 |   |
| Ugar         |                            |                           |   |                                   |                      | Samples scheduled for W/E 27th Oct 2017. Samples tested In-House (Iama) 28/10/17  |
| Warraber     | Yes                        | Yes                       | 9/10/2017                                     | Yes                               | Pass                 | Sample tested In-House (Iama) 10/10/17  |
| <b>Date:</b> | <b>Nov-17</b>              |                           |   |                                   |                      |   |
| Badu         | Yes                        | Yes                       | 27/11/2017                                    | Yes                               | Pass                 | Samples tested In-House (Iama) 28/11/17   |
| Boigu        | Yes                        | Yes                       | 9/11/2017                                     | Yes                               | Pass                 | In House tested (Iama) 10/11/17   |
| Dauan        |                            |                           |   |                                   |                      | No record logged of sampling  |
| Erub         | Yes                        | Yes                       | 27/11/2017                                    |                                   |                      | No record logged of sampling  |
| Hammond      | Yes                        | Yes                       | 7/11/2017                                     |                                   |                      |   |
| Iama         | Yes                        | No                        |   | Yes                               | Pass                 | In House tested (Iama) 08/11/17   |
| Kubin        | Yes                        | Yes                       | 9/11/2017                                     | Yes                               | Pass                 | Samples scheduled for 22/11/17. Tested In-House (Iama) 23/11/17                   |



Annual Report 2017-18  
ECM #238394

| Location     | Sampling Compliance        |                           |  |                                   |                                     |  |
|--------------|----------------------------|---------------------------|--|-----------------------------------|-------------------------------------|--|
|              | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts    | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail)                | Comments   |
| Mabuiag      | Yes                        | Yes                       | 27/11/2017                                       |                                   |                                     | No record logged of sampling   |
| Masig        | Yes                        | Yes                       | 28/11/2017                                       | Yes                               | Pass                                | Samples tested In-House (Iama) 29/11/17  |
| Mer          | Yes                        | Yes                       | 28/11/2017                                       | Yes                               |                                     | No record logged of sampling   |
| Poruma       | Yes                        | Yes                       | 9/11/2017  | Yes                               | Pass                                | Samples scheduled for 27/11/17. Tested In-House (Iama) 28/11/17  |
| Saibai       | Yes                        | Yes                       | 28/11/2017                                       | Yes                               | Pass                                | Samples scheduled for 29/11/17. Tested In-House (Iama) 30/11/17  |
| St Pauls     | Yes                        | Yes                       | 9/11/2017  | Yes                               | Pass                                | Samples scheduled for 22/11/17. Tested In-House (Iama) 23/11/17  |
| Ugar         | Yes                        | Yes                       | 7/11/2017  | Yes                               | Pass                                | In House tested (Iama) 08/11/17  |
| Warraber     | Yes                        | Yes                       | 9/11/2017  | Yes                               | Pass                                | Samples scheduled for 27/11/17. Tested In-House (Iama) 28/11/17  |
| <b>Date:</b> | <b>Dec-17</b>              |                           |  |                                   |                                     |  |
| Badu         | Yes                        | Yes                       | 6/12/2017  | Yes                               | Pass                                |  |
| Boigu        | Yes                        | Yes                       | 5/12/2017  | No                                | Pass                                | Sample Esky Sent on time; Skytrans did not deliver to Iama. Esky ended up on Horn Island. Skytrans staff sent esky to Iama 6/12. Samples tested In-House (Iama) 07/12/17   |
| Dauan        | Yes                        | Yes                       | 14/12/2017                                       | Yes                               | Pass                                | Samples tested In-House (Iama) 15 /12/17   |
| Erub         | Yes                        | Yes                       | 6/12/2017  |                                   |                                     |  |
| Hammond      | Yes                        | Yes                       |  |                                   |                                     |  |
| Iama         | Yes                        | No                        |  | Yes                               | Pass                                | In-House Tested 22/12/17   |
| Kubin        | Yes                        | Yes                       | 5/12/2017  | Yes                               | Pass                                | Sample Esky Sent on time; Skytrans did not deliver to Iama. Esky ended up on Horn Island. Esky scheduled to travel to Iama 6/12. Samples tested In-House (Iama) 07/12/17   |
| Mabuiag      | Yes                        | Yes                       | 5/12/2017  |                                   |                                     | Skytrans cancelled flight; 05/12/17. Sample rescheduled for Tues 12/12/17  |
| Masig        | No                         | Yes                       | 5/12/2017 /2 Sample after a failed sample; 21/12 | Yes                               | Fail-Sample point#1 Council Office. | Water sample did not travel on 5/12 due to no esky on island. Reschedule has been booked for 11/12. (Esky arrived back on island; morning flight 5/12). Second attempt to send sample unsuccessful; Skytrans flight did not arrive on island. Reschedule will be arranged for Thursday 14/12. <b>Failure at sample point #1- Council Office. (Tested on 15/12/2017).</b> Re-sample tested 22/12/17 -PASS |

Annual Report 2017-18  
ECM #238394

| Location     | Sampling Compliance        |                           |   |                                   |                      |   |
|--------------|----------------------------|---------------------------|---|-----------------------------------|----------------------|---|
|              | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail) | Comments  |
| Mer          | yes                        | Yes                       | 6/12/2017                                     | Yes                               | Pass                 |   |
| Poruma       | yes                        | Yes                       | 6/12/2017                                     | Yes                               | Pass                 | Samples tested In-House (Iama) 07/12/17   |
| Saibai       | yes                        | Yes                       | 6/12/2017                                     |                                   |                      |   |
| St Pauls     | yes                        | Yes                       | 5/12/2017                                     | Yes                               | Pass                 |   |
| Ugar         | yes                        | No                        | 19/12/2017                                    | Yes                               | Pass                 | Samples tested In-House (Iama) 19/12/17   |
| Warraber     | yes                        | Yes                       | 6/12/2017                                     | Yes                               | Pass                 | Samples tested In-House (Iama) 07/12/17   |
| <b>Date:</b> | <b>Jan-18</b>              |                           |   |                                   |                      |   |
| Badu         | Yes                        | Yes                       | 15/01/2018                                    | Yes                               | Pass                 | Samples tested In-House (Iama) 20/01/18   |
| Boigu        | Yes                        | Yes                       | 15/01/2018                                    |                                   |                      |   |
| Dauan        | Yes                        | Yes                       | 16/01/2018                                    |                                   |                      |   |
| Erub         | Yes                        | Yes                       | 16/01/2018                                    |                                   |                      |   |
| Hammond      | Yes                        | Yes                       | 18/01/2018                                    | Yes                               | Pass                 |   |
| Iama         | Yes                        | Yes                       |   | Yes                               | Pass                 | <b>In House Testing. 23/1/18</b>  |
| Kubin        | Yes                        | Yes                       | 15/01/2018                                    | Yes                               | Pass                 | Samples tested In-House(Iama) 16/01/2018  |
| Mabuiag      | Yes                        | Yes                       | 19/01/2018                                    |                                   |                      |   |
| Masig        | Yes                        | Yes                       | 16/01/2018<br>rescheduled for<br>17/01/2018   | Yes                               | Pass                 | Sample sent 17/01/2018  |
| Mer          | Yes                        | Yes                       | 16/01/2018                                    | Yes                               | Pass                 | Samples tested In-House(Iama) 17/01/2018  |
| Poruma       | Yes                        | Yes                       | 16/01/2018                                    | Yes                               | Pass                 | Plane cancelled due to no passengers to pick up. Rescheduled to 17/01. Samples tested In-House (Iama) 18/1/18 |
| Saibai       | Yes                        | Yes                       | 15/01/2018                                    |                                   |                      |   |
| St Pauls     | Yes                        | Yes                       | 15/01/2018                                    | Yes                               | Pass                 | Samples tested In-House (Iama) 20/01/18   |

Annual Report 2017-18  
ECM #238394

| Location     | Sampling Compliance        |                           |   |                                   |                      |   |
|--------------|----------------------------|---------------------------|---|-----------------------------------|----------------------|---|
|              | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail) | Comments                                |
| Ugar         | Yes                        | No                        | TBA   |                                   |                      |   |
| Warraber     | Yes                        | Yes                       | 16/01/2018                                    |                                   |                      |   |
| <b>Date:</b> | <b>Feb-18</b>              |                           |   |                                   |                      |   |
| Badu         | Yes                        | Yes                       |   | Yes                               |                      | Samples tested In-House (Iama) 19/20/18 |
| Boigu        |                            |                           |   |                                   |                      |   |
| Dauan        |                            |                           |   |                                   |                      |   |
| Erub         |                            |                           |   |                                   |                      |   |
| Hammond      |                            |                           |   |                                   |                      |   |
| Iama         |                            |                           |   |                                   |                      |   |
| Kubin        |                            |                           |   |                                   |                      |   |
| Mabuiag      |                            |                           |   |                                   |                      |   |
| Masig        |                            |                           |   |                                   |                      |   |
| Mer          |                            |                           |   |                                   |                      |   |
| Poruma       | Yes                        | Yes                       | 15/02/2018                                    | Yes                               | Pass                 | Samples tested In-House (Iama) 16/02/18 |
| Saibai       |                            |                           |   |                                   |                      |   |
| St Pauls     |                            |                           |   |                                   |                      |   |
| Ugar         | Yes                        | Yes                       | 14/02/2018                                    | Yes                               | Pass                 | Samples tested In-House (Iama) 15/02/18 |
| Warraber     | Yes                        | Yes                       | 16/02/2018                                    | Yes                               | Pass                 | Samples tested In-House (Iama) 17/02/18 |
| <b>Date:</b> | <b>Mar-18</b>              |                           |   |                                   |                      |   |
| Badu         | Yes                        | Yes                       | 6/03/2018                                     | Yes                               | Pass                 | Tested In-House on Iama                 |
| Boigu        | Yes                        | Yes                       | 6/03/2018                                     | Yes                               | Pass                 | Tested In-House on Iama                 |
| Dauan        |                            |                           | 6/03/2018                                     | Yes                               | Pass                 |   |

Annual Report 2017-18  
ECM #238394

| Location        | Sampling Compliance        |                           |   |                                   |                      |   |
|-----------------|----------------------------|---------------------------|---|-----------------------------------|----------------------|---|
|                 | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail) | Comments  |
| <b>Erub</b>     | Yes                        | Yes                       | 22/03/2018                                    | Yes                               | Pass                 |   |
| <b>Hammond</b>  | Yes                        | Yes                       | 6/03/2018                                     | Yes                               | Pass                 | Water sample tested at Cairns Lab   |
| <b>Iama</b>     | Yes                        | Yes                       | 28/03/2018                                    | Yes                               | Pass                 | Tested In-House on Iama   |
| <b>Kubin</b>    | Yes                        | Yes                       | 6/03/2018                                     | Yes                               | Pass                 | Tested In-House on Iama   |
| <b>Mabuiag</b>  | Yes                        | Yes                       | 6/03/2018                                     | yes                               | Pass                 | Tested In-House on Iama   |
| <b>Masig</b>    | Yes                        | Yes                       | 5/03/2018                                     | Yes                               | Pass                 |   |
| <b>Mer</b>      | Yes                        | Yes                       | 5/03/2018 1st Resample- 23/03/2018            | Yes                               | Fail                 | Water sample at the school did not meet NH & MRC (2011) Guidelines for drinking water. Follow up samples were scheduled. 23/03/18 - 1st resample; Passed. |
| <b>Poruma</b>   | Yes                        | Yes                       | 5/03/2018                                     | Yes                               | Pass                 | Tested In-House on Iama   |
| <b>Saibai</b>   | Yes                        | Yes                       | 6/03/2018                                     | Yes                               | Pass                 | Water sample tested at Cairns Lab   |
| <b>St Pauls</b> | Yes                        | Yes                       | 6/03/2018                                     | Yes                               | Pass                 | Tested In-House on Iama   |
| <b>Ugar</b>     |                            |                           |   |                                   |                      |   |
| <b>Warraber</b> | Yes                        | Yes                       | 5/03/2018                                     |                                   |                      |   |
| <b>Date:</b>    | <b>Apr-18</b>              |                           |   |                                   |                      |   |
| <b>Badu</b>     | Yes                        | Yes                       | 12/04/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)  |
| <b>Boigu</b>    | Yes                        | Yes                       | 11/04/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)  |
| <b>Dauan</b>    | Yes                        | Yes                       | 11/04/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)  |
| <b>Erub</b>     | Yes                        | Yes                       | 10/04/2018                                    |                                   |                      | Erub E.coli and Enterococci testing conducted in Cairns Lab   |
| <b>Hammond</b>  | Yes                        | Yes                       | 4/04/2018                                     | Yes                               | Pass                 | Tested in Cairns Lab  |
| <b>Iama</b>     | Yes                        | Yes                       |   | Yes                               | Pass                 | Tested In-House (Iama)  |
| <b>Kubin</b>    | Yes                        | Yes                       | 12/04/2018                                    | yes                               | Pass                 | Tested in Cairns Lab  |

Annual Report 2017-18  
ECM #238394

| Location        | Sampling Compliance        |                           |   |                                   |                      |  |
|-----------------|----------------------------|---------------------------|---|-----------------------------------|----------------------|--|
|                 | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail) | Comments   |
| <b>Mabuiag</b>  | Yes                        | Yes                       | 12/04/2018                                    |                                   |                      |  |
| <b>Masig</b>    | Yes                        | Yes                       | 10/04/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)   |
| <b>Mer</b>      | Yes                        | Yes                       | 17/04/2018                                    | Yes                               | Pass                 | Tested in Cairns Lab   |
| <b>Poruma</b>   | Yes                        | Yes                       | 10/04/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)   |
| <b>Saibai</b>   | Yes                        | Yes                       | 11/04/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)   |
| <b>St Pauls</b> | Yes                        | Yes                       | 12/04/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)   |
| <b>Ugar</b>     |                            |                           |   |                                   |                      |  |
| <b>Warraber</b> | Yes                        | Yes                       | 10/04/2018-1<br>27/04/2018                    | Yes                               | Pass                 | Skytrans did not land as scheduled due to no passengers to pick up. Airline failed to inform TSIRC Engineering of change in schedule. Samples re-booked for 27/04/2018 |
| <b>Date:</b>    | <b>May-18</b>              |                           |   |                                   |                      |  |
| <b>Badu</b>     | Yes                        | Yes                       | 17/05/2018 / 1<br>24/05/2018                  |                                   |                      | Water sample re-scheduled for 24/05/2018   |
| <b>Boigu</b>    | Yes                        | Yes                       | 16/05/2018 /1<br>23/05/2018                   | Yes                               | Pass                 | Water sample re-scheduled for 23/05/2018. Esky was delivered by operator.  |
| <b>Dauan</b>    | Yes                        | Yes                       | 16/05/2018 /1<br>23/05/2018                   | Yes                               | Pass                 | Water sample re-scheduled for 23/05/2018   |
| <b>Erub</b>     | Yes                        | Yes                       | 17/05/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)   |
| <b>Hammond</b>  | Yes                        | Yes                       | 28/05/2018                                    |                                   |                      |  |
| <b>Iama</b>     |                            |                           |   |                                   |                      | Tested In-House (Iama)   |
| <b>Kubin</b>    | Yes                        | Yes                       | 17/05/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)   |
| <b>Mabuiag</b>  | Yes                        | Yes                       | 17/05/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)   |
| <b>Masig</b>    | Yes                        | Yes                       | 15/05/2018/1<br>22/05/2018                    | Yes                               | Pass                 | Water sample rescheduled for 22/05/2018. Tested In-House (Iama)  |
| <b>Mer</b>      | Yes                        | Yes                       | 3/05/2018                                     | Yes                               | Pass                 | Tested in Cairns Lab.  |

Annual Report 2017-18  
ECM #238394

| Location     | Sampling Compliance        |                           |   |                                   |                      |  |
|--------------|----------------------------|---------------------------|---|-----------------------------------|----------------------|--|
|              | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail) | Comments   |
| Poruma       | Yes                        | Yes                       | 15/05/2018/1<br>22/05/2018                    | Yes                               | Pass                 | Water sample rescheduled for 22/05/2018. Tested In-House (Iama)  |
| Saibai       | Yes                        | Yes                       | 16/05/2018 /1<br>28/05/2018                   | Yes                               | Pass                 | Water sample re-scheduled for 28/05/2018. Tested In-House (Iama)   |
| St Pauls     | Yes                        | Yes                       | 17/05/2018                                    | Yes                               | Pass                 | Tested In-House (Iama)   |
| Ugar         |                            |                           |   |                                   |                      |  |
| Warraber     | Yes                        | Yes                       | 15/05/2018/1<br>22/05/2018                    | Yes                               | Pass                 | Water sample rescheduled for 22/05/2018. Tested In-House (Iama)  |
| <b>Date:</b> | <b>Jun-18</b>              |                           |   |                                   |                      |  |
| Badu         | Yes                        | Yes                       | 14/06/2018/1<br><b>27/06/2018</b>             | Yes                               | Pass                 | Cairns Lab   |
| Boigu        | Yes                        | Yes                       | 14/06/2018                                    | Yes                               | Pass                 | In-house (Iama)  |
| Dauan        | Yes                        | Yes                       | 13/06/2018/1<br><b>27/06/2018</b>             | NO                                |                      | Samples arrived past 24hr time frame on Iama; Samples travelled as scheduled however were held overnight on Horn and arrived into Iama 14/06. Re-samples will need to be arranged for W/E 27/06. Sent to Cairns Lab for testing. |
| Erub         | Yes                        | Yes                       | 12/06/2018                                    | Yes                               | Pass                 | In-house (Iama)  |
| Hammond      | Yes                        | Yes                       | 8/06/2018                                     | Yes                               | Pass                 | In-house (Iama)  |
| Iama         | Yes                        | Yes                       |   |                                   |                      | In-house (Iama)  |
| Kubin        | Yes                        | Yes                       | 11/06/2018                                    | Yes                               | Pass                 | In-house (Iama)  |
| Mabuiag      | Yes                        | Yes                       | 14/06/2018/1<br><b>27/06/2018</b>             |                                   |                      | Samples rescheduled for 27/06/2018. 1st sample did not travel due to Skytrans delays with flight schedule.   |
| Masig        | Yes                        | Yes                       | 12/06/2018                                    | Yes                               | Pass                 | In-house (Iama)  |
| Mer          | Yes                        | Yes                       | 12/06/2018                                    | Yes                               | Pass                 | In-house (Iama)  |
| Poruma       | Yes                        | Yes                       | 12/06/2018                                    | Yes                               | Pass                 | In-house (Iama)  |

Annual Report 2017-18  
ECM #238394

| Location        | Sampling Compliance        |                           |   |                                   |                      |  |
|-----------------|----------------------------|---------------------------|---|-----------------------------------|----------------------|--|
|                 | Eskys on Island (Yes / No) | Freight Booked (Yes / No) | Sample Delivery Date / No. of Failed Attempts | Sample at Lab On Time* (Yes / No) | Sample (Pass / Fail) | Comments   |
| <b>Saibai</b>   | Yes                        | Yes                       | 13/06/2018                                    |                                   |                      | Plane arrived earlier than scheduled; Samples rescheduled for W/E 22/06                          |
| <b>St Pauls</b> | Yes                        | Yes                       | 11/06/2018                                    | Yes                               | Pass                 | In-house (Iama)  |
| <b>Ugar</b>     | Yes                        | Yes                       | 20/06/2018                                    |                                   |                      | In-house (Iama)  |
| <b>Warraber</b> | Yes                        | Yes                       | 13/06/2018/1<br><b>27/06/2018</b>             | No                                |                      | Samples arrived past 24hr time limit on Iama; Re-samples will need to be arranged for W/E 22/06. |