

20/21

Childers Wastewater Treatment Plant Recycled Water Scheme (SRN025)

Annual Report
July 2020 to June 2021

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1.0 Introduction

The purpose of this annual report is to provide the Department of Regional Development, Manufacturing & Waters (the Regulator or DRDMW) with information on the overall performance of the single-entity Childers Recycled Water Scheme (the scheme) for the period 1 July 2020 to 30 June 2021.

1.1 Annual reporting compliance

It is a requirement under Section 273 of the *Water Supply (Safety & Reliability) Act 2008* (the Act) and condition 7.4 of the Information Notice issued by DRDMW on the 24th of January 2020, that an annual report is prepared and submitted to the Regulator within 120 Business days of the end of each financial year. Table 1 outlines this Annual Report’s compliance against Section 273 of the Act and the Annual Reporting Guideline for Recycled Water Schemes (2010).

Table 1. Annual RWMP Report Requirements.

| Act section | Details | Annual reporting guideline section | Compliance |
|-------------|---|------------------------------------|---|
| s273(1) | The relevant entity for a recycled water scheme must prepare an annual report for each financial year after a recycled water management plan for the scheme has been approved | Section 2.3 | This report is for the 2020-21 financial year. |
| s273(2)(a) | The annual report must— be prepared in accordance with the guidelines, if any, made by the regulator about the preparation of annual reports; and | Entire document | The content of this report aligns with the Annual reporting Guideline for recycled water schemes. |
| s273(2)(b) | state the outcome of any review of the recycled water management plan in the financial year to which the annual report relates, and how the matters raised in the review have been addressed; and | Section 2.4(a) | 5.1 Reviews – no review of the RWMP was conducted in the 2020-21 financial year |
| s273(2)(c) | contain details of the findings of, and any recommendations stated in, an internal audit report under section 260 or a regular audit report under section 261 given to the regulator in the financial year; and | Section 2.4(b) | 5.2 Audits – an internal audit was not undertaken in the 2020-21 financial year A regular audit was undertaken by Viridis Consultants in this financial year |
| s273(2)(d) | contain details of the information given to the regulator under section 270 or 271 in the financial year. | Section 2.4(c) | 2.0 Recycled Water Compliance - notice of noncompliance with Water |

| | | | |
|----------|--|-------------|---|
| | | | Quality Criteria was reported in December 2020 4.0 Prescribed Incidents – there were none recorded in the 2020-21 financial year |
| s273(3) | The relevant entity must give a copy of the annual report to the regulator within 120 business days after the end of the financial year. | Section 2.3 | This report has been submitted to the regulator within the specified time. |
| ss273(4) | If a relevant entity is a recycled water provider for a single entity recycled water scheme, the annual report may be combined with a report given to the regulator under section 141. | | Bundaberg Regional Council’s Drinking Water Quality Management Plan is submitted separately to this report. |

1.2 Scheme Overview

The Childers Wastewater Treatment Plant (WWTP) receives raw sewerage from the Childers sewerage network for treatment. Once treated, the effluent produced meets the quality requirements of Class B recycled water under the *Public Health Regulation 2018*. The recycled water is distributed to a storage dam located on a neighboring private property for agricultural use. Bundaberg Regional Council currently has an approved Recycled Water Agreement with this landholder and a subsequent approved Recycled Water Management Plan (RWMP).

2.0 Compliance with Water Quality Criteria

Council is currently required to produce recycled water to the quality standards which are stipulated in Section 7.5 and Section 7.6 of the Childers Recycled Water Scheme Information Notice – January 2020 (Table 2) for the irrigation of minimally processed food crops: avocados, custard apples, lychee, mangoes, and pumpkins.

Table 2. Water Quality Criteria for Childers Recycled Water Scheme

| Factor | Sampling Frequency | Initial Sample Value | Annual Value |
|-------------------------|--------------------|---|--|
| <i>Escherichia coli</i> | Weekly | Must be less than 100 cfu/100ml or MPN/100 mL | At least 95% of the samples taken for a 12-month period must contain less than 100 cfu/100mL or MPN/100 mL |

Water quality results between 1st July 2020 and 30th June 2021 are displayed in Appendix 1 with a summary of the results represented in Table 3.

Table 3. Compliance with Water Quality Criteria for Childers Recycled Water Scheme 2020-21

| Number of Samples | Compliant Samples (Initial Value) | Non-compliant Samples | Percentage Compliance (Initial Value) | Compliant Samples (Annual Value 2020) | Non-compliant Samples (Annual Value) | Percentage Compliance (Annual Value) |
|-------------------|-----------------------------------|-----------------------|---------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|
| 52 | 51 | 1 | 98.08% | 51 | 1 | 98.08% |

2.1 Non-compliance Reported to DRDMW

During the 2020-21 reporting year Council reported one (1) non-compliance with the *E coli* initial value on the 22nd of December 2020. The initial exceedance resulted in the continued reporting of the annual value to the Regulator following several exceedances recorded at the end of the 2019-20 financial year. During the 2020–2021 financial year Council was able to achieve 98.08% compliance for both the initial and annual values. Monitoring results displayed in Appendix 1 show that the scheme has demonstrated an improvement in effluent quality since this exceedance. The scheme has now returned to full compliance with the annual value and Council is no longer required to provide monthly updates to the Regulator.

3.0 Any Failures to Test and Missing Data Information for Annual Reports

Council has conducted all required analysis during the reporting period from 1st July 2020 to 30th June 2021 (Table 4).

Table 4. Frequency of testing required during the 2020-21 reporting period.

| Parameter | Regulated standard (units) | Frequency of test | Required number of tests | Actual number of tests taken with scheduled frequency | Number of tests missed | Date/s notified to regulator | Comments |
|----------------|----------------------------|-------------------|--------------------------|---|------------------------|------------------------------|-----------------------------------|
| <i>E. coli</i> | cfu/100mL | Weekly | 52 | 52 | 0 | N/A | Scheduled number of test complete |

4.0 Prescribed Incidents

There were no recorded prescribed incidents for the Childers Recycled Water Scheme during this reporting period.

5.0 Re-validation assessment

5.1 Reviews

A voluntary annual management review of the Childers RWMP was conducted by Council in October 2020. This review is Council's initiative as a part of continuous improvement program to review current practices, identify any changes and keep the plan updated more frequently but this is not a legislative requirement.

Council is required to undertake a regular review of the Childers RWMP by the 14th of February 2022 in accordance with Section 258 of the *Water Supply Safety and Reliability Act 2011*. This review will be conducted to verify that the existing RWMP aligns with the current operations of the Childers WWTP.

5.2 Audits

Council engaged Viridis Consultants to undertake a regular audit of the Childers RWMP in November 2020, with the report and associated information being sent to the Regulator on the 7th of December 2020. The audit detailed high compliance with the conditions of the approval with only two (2) minor non-compliances noted. It was also noted that Council had already undertaken actions to address the non-compliances identified. Following the submission of the audit report Council supplied the Regulator with an action plan on 16th December 2020 to address the non-compliances identified. Several opportunities for improvement were also identified and will be addressed in the next regular review of the RWMP scheduled for the 2021-22 financial year.

Council's Integrated Management System Team will undertake the next internal audit of the RWMP, due by 14th Feb 2022.

Council conducted an annual Inspection of the Childers Recycled Water Scheme on 4th December 2020. The inspection found that activities on the property were in accordance with the Recycled Water Agreement and associated legislation, the next inspection will occur late 2021.

Appendix 1 – *E. coli* Results July 2020 to June
2021

| Sample Date | Sample Description | <i>E. coli</i> confirmed (cfu/100mL) |
|-------------|-------------------------|--------------------------------------|
| 7/07/2020 | Effluent after chlorine | 5 |
| 14/07/2020 | Effluent after chlorine | 0 |
| 23/07/2020 | Effluent after chlorine | 0 |
| 28/07/2020 | Effluent after chlorine | 1 |
| 4/08/2020 | Effluent after chlorine | 1 |
| 11/08/2020 | Effluent after chlorine | 3 |
| 20/08/2020 | Effluent after chlorine | 1 |
| 24/08/2020 | Effluent after chlorine | 10 |
| 1/09/2020 | Effluent after chlorine | 0 |
| 8/09/2020 | Effluent after chlorine | 2 |
| 17/09/2020 | Effluent after chlorine | 10 |
| 22/09/2020 | Effluent after chlorine | 1 |
| 29/09/2020 | Effluent after chlorine | 1 |
| 6/10/2020 | Effluent after chlorine | 2 |
| 15/10/2020 | Effluent after chlorine | 11 |
| 22/10/2020 | Effluent after chlorine | 1 |
| 27/10/2020 | Effluent after chlorine | 1 |
| 3/11/2020 | Effluent after chlorine | 2 |
| 11/11/2020 | Effluent after chlorine | 1 |
| 17/11/2020 | Effluent after chlorine | 1 |
| 24/11/2020 | Effluent after chlorine | 1 |
| 1/12/2020 | Effluent after chlorine | 0 |
| 10/12/2020 | Effluent after chlorine | 0 |
| 15/12/2020 | Effluent after chlorine | 2 |
| 22/12/2020 | Effluent after chlorine | 110 |
| 29/12/2020 | Effluent after chlorine | 0 |
| 7/01/2021 | Effluent after chlorine | 0 |
| 12/01/2021 | Effluent after chlorine | 0 |
| 19/01/2021 | Effluent after chlorine | 0 |
| 27/01/2021 | Effluent after chlorine | 1 |
| 4/02/2021 | Effluent after chlorine | 0 |
| 9/02/2021 | Effluent after chlorine | 0 |
| 16/02/2021 | Effluent after chlorine | 1 |
| 23/02/2021 | Effluent after chlorine | 1 |
| 4/03/2021 | Effluent after chlorine | 0 |
| 9/03/2021 | Effluent after chlorine | 1 |
| 16/03/2021 | Effluent after chlorine | 0 |
| 24/03/2021 | Effluent after chlorine | 0 |
| 1/04/2021 | Effluent after chlorine | 1 |
| 6/04/2021 | Effluent after chlorine | 21 |
| 13/04/2021 | Effluent after chlorine | 1 |
| 20/04/2021 | Effluent after chlorine | 0 |
| 29/04/2021 | Effluent after chlorine | 0 |
| 4/05/2021 | Effluent after chlorine | 0 |
| 11/05/2021 | Effluent after chlorine | 0 |
| 18/05/2021 | Effluent after chlorine | 1 |
| 26/05/2021 | Effluent after chlorine | 1 |
| 1/06/2021 | Effluent after chlorine | 1 |
| 8/06/2021 | Effluent after chlorine | 1 |
| 14/06/2021 | Effluent after chlorine | 1 |
| 24/06/2021 | Effluent after chlorine | 1 |
| 29/06/2021 | Effluent after chlorine | 0 |