

## Environmental Protection Act 1994

### Environmental Protection Order

*This environmental protection order is issued by the administering authority pursuant to section 358 of the Environmental Protection Act 1994.*

Northern SEQ Distributor- Retailer Authority trading as Unitywater  
33 King Street  
CABOOLTURE QLD 4510

Attention: Rhett Duncan, Executive Manager Customer Delivery

Your reference: EPPR00869113

Our reference: 101,0005498/ C-CPLRC-100189762

9/12/2022

Dear Mr Duncan,

**Take notice:** that under the *Environmental Protection Act 1994* (EP Act) this environmental protection order (EPO) is issued to Northern SEQ Distributor - Retailer Authority T/A Unitywater (Unitywater) ABN 89 791 717 472 (you) by the administering authority. The administering authority is the Chief Executive of the Department of Environment and Science (the department).

The EPO is issued in respect to the activities of Kawana Sewage Treatment Plant (the STP), Main Drive, Bokarina, QLD 4575, on land described as Lot 101 on Plan SP295012 (the premises). You are authorised to undertake Environmentally Relevant Activity (ERA) 63- 1g- sewage treatment >100,000 Equivalent Persons (EP) at the premises under the conditions of the environmental authority- EPPR00869113 (the EA).

#### A. Grounds

This EPO is issued on the following grounds:

1. The department requires you to take reasonable measures to secure compliance with the General Environmental Duty. The General Environmental Duty is detailed in s319 of the Act which states the following: *'A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practical actions to prevent or minimise the harm (the **general environmental duty**); and*
2. The department requires you to take reasonable measures to secure compliance with condition/s KLW4 of Environmental Authority EPPR00869113 dated 12 July 2021 which states: *'The total quantity of contaminants released from release point numbers W1 and W3 during any dry weather day must not exceed 34,000 cubic metres and during a wet weather day must not exceed 170,000 cubic metres.'*



The facts and circumstances forming the basis for these grounds are:

1. You are authorised to undertake the ERA in accordance with the conditions prescribed in the EA.
2. The EA authorises combined releases from Landsborough STP and Kawana STP to be preferentially discharged to the Pacific Ocean through the Pacific Ocean Release (release point W1) with an alternate licenced discharge point to the Mooloolah River (release point W3) to be used when the ocean outfall is either unavailable or under prescribed wet weather conditions (bypass events).
3. Condition KLV4 of the EA prescribes the following "The total quantity of contaminants released from release point numbers W1 and W3 during any **dry weather day** must not exceed 34,000 cubic metres and during a **wet weather day** must not exceed 170,000 cubic metres".
4. A dry weather day is defined in the EA as "*a day during which no rainfall is recorded at any rainfall measuring station recognised by the Commonwealth Bureau of Meteorology within the sewerage area connected to the sewage treatment plant, or if no such meaning exists, at the nearest such station to the sewage treatment plant. The term also excludes days during which recorded rainfall over the three preceding days exceeds 100mm*".
5. A wet weather day is defined in the EA as "*a day which is not a dry weather day*".
6. Release point W1 is defined in the EA as "*Outfall pipe located in waters described as the Pacific Ocean off Warana Beach, Caloundra*".
7. Release point W3 is defined in the EA as "*Outfall pipe located in waters described as opposite Portion 360, Parish of Mooloolah, County of Canning*".
8. Waters are defined in the EA as "*rivers, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water natural or artificial watercourse, bed and banks of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off and groundwater and any part thereof*".
9. Due to population growth, the current processing capacity of the STP is nearing capacity which has resulted in exceedances of the dry weather day release limit prescribed in EA condition KLV4.
10. Since May 2020, due to constraints within the Maroochy STP network, flows of up to approx. 8 – 10 ML/day have been diverted from the Maroochy STP to the Kawana STP discharge points which has further exacerbated capacity constraints of the Kawana STP and contributed to non-compliances with the dry weather flow limits within the EA.
11. The majority of flows are discharged through the ocean outfall point (W1), however, condition KLV2 authorises effluent release to the Mooloolah River (W3) only when:
  - the ocean outfall is unavailable due to maintenance; or
  - during excessive rainfall resulting in excess of 3 x Average Dry Weather Flow (ADWF) through the Kawana STP and where storage of the effluent is no longer possible.
12. The ADWF of the STP has been increasing over time with more inputs from population growth in the catchment, and the diversion from Maroochy. The STP and supporting infrastructure has not been upgraded to meet the wet weather day release requirements.
13. The areas serviced by the Kawana STP are forecast to see a 50% increase in connected population over the next 15 years.
14. Unitywater provides the department with monthly reports with respect to all STP's within the Sunshine Coast Regional Council, Moreton Bay Regional Council and Noosa Shire Council areas for assessment of compliance of conditions with the EA.

15. The department has assessed the monthly reports provided for the premises and confirm that condition KLW4 of the EA was contravened 56 times between December 2020 and December 2021 for exceedance of the maximum effluent release volume limit in the EA of 34,000 cubic meters per dry weather day.
16. Given the recurring and ongoing nature of this non-compliance it is reasonable to require action to secure compliance with the EA.
17. On 18 December 2020 Unitywater applied to amend condition KLW4 of the EA, seeking to change effluent volume release limits in order to accommodate the increasing demand on the STP and reduce the frequency of non-compliance with the EA. This was proposed as a short-term solution while longer term infrastructure solutions are developed.
18. The department determined that the proposed amendments would result in a significant increase in the total permitted effluent release volumes over a 12-month period and potentially allow for releases to waters to occur during base flow conditions. Subsequently, the application was refused.
19. Over 2019/2020 the Kawana STP was upgraded to a 200,000EP capacity (up from 90,000EP) which included the installation of a Moving Bed Bioreactor (MBBR) process. Following this upgrade, ongoing optimization of the plant has resulted in fluctuating effluent quality and resulted in the release of micro-plastics from the media to the environment.
20. The *Environmental Protection (Water) Policy 2009 (EPP) Mooloolah River environmental values and water quality objectives* (July 2010) identifies the following environmental values (EV) for the Middle and Lower Mooloolah River Estuary:

**Table 1: Environmental values (EVs) for Mooloolah River catchment waters**

| MOOLOOLAH RIVER BASIN<br>(Refer plan WQ1412)     | Environmental values <sup>1-5</sup>                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |                                                                                       |
|--------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                  | Aquatic ecosystem                                                                   | Irrigation                                                                          | Farm supply/use                                                                     | Stock water                                                                         | Aquaculture                                                                         | Human consumer <sup>5</sup>                                                          | Primary recreation <sup>5</sup>                                                       | Secondary recreation <sup>5</sup>                                                     | Visual recreation <sup>5</sup>                                                        | Drinking water <sup>5</sup>                                                           | Industrial use                                                                        | Cultural and spiritual values                                                         |
| Environmental Value Zone (listed alphabetically) |  |  |  |  |  |  |  |  |  |  |  |  |
| Mooloolah Middle and Lower Estuary               | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     | ✓                                                                                    | ✓                                                                                     | ✓                                                                                     | ✓                                                                                     |                                                                                       | ✓                                                                                     | ✓                                                                                     |
| Mooloolah Open Coastal Waters                    | ✓                                                                                   |                                                                                     |                                                                                     |                                                                                     | ✓                                                                                   | ✓                                                                                    | ✓                                                                                     | ✓                                                                                     | ✓                                                                                     |                                                                                       |                                                                                       | ✓                                                                                     |

21. The EPP also identifies the following water quality objectives (WQOs) for the relevant receiving environments to the Kawana STP:

**Table 2: Aquatic ecosystem water quality objectives to protect aquatic ecosystem environmental value**

| Environmental Value Zone/<br>Water Type                 | Management Intent /Level of protection | MOOLOOLAH RIVER BASIN (refer plan WQ1412) <sup>1-4</sup><br>Aquatic ecosystem water quality objectives                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|---------------------------------------------------------|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------|---------------------------------------|-------------------------|----------------------|----------------------------------------------|-----------------|------------|--------------------------------------------|-------------|----------------------|
|                                                         |                                        | Note: WQOs for indicators are shown as a range of 20 <sup>th</sup> , 50 <sup>th</sup> and 80 <sup>th</sup> percentiles to be maintained or achieved (e.g. 3–4–5), lower and upper limits (e.g. pH: 7.2–8.2), or as a single value for which a median of test data should be equal to or less than (e.g. 15). Refer to Section 3.1.1 for more details on how to apply WQOs.<br>HEV – high ecological value; SD – slightly disturbed; MD – moderately disturbed; ID – insufficient data. NA – not applicable |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|                                                         |                                        | Ammonia (µg/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Oxidised Nitrogen (µg/L) | Total Nitrogen (µg/L) | Filterable Reactive Phosphorus (µg/L) | Total Phosphorus (µg/L) | Chlorophyll-a (µg/L) | Dissolved Oxygen <sup>2</sup> (% saturation) | Turbidity (NTU) | Secchi (m) | Total Suspended Solids <sup>3</sup> (mg/L) | pH          | Conductivity (µS/cm) |
| MOOLOOLAH RIVER – middle estuary waters                 |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
| Mooloolah Middle Estuary Section 1                      | MD                                     | Low flow<br>Conductivity >40,000 µS/cm                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|                                                         |                                        | 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9                        | 230                   | 6                                     | 20                      | 3                    | 85 - 105                                     | 5               | 1.3        | ID                                         | 7 - 8.4     | NA                   |
|                                                         |                                        | High flow<br>Conductivity ≤40,000 µS/cm                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|                                                         |                                        | 35                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 35                       | 490                   | 10                                    | 55                      | 3                    | 85 - 105                                     | 20              | 0.5        | ID                                         | 7 - 8.4     | NA                   |
| Mooloolah Middle Estuary Section 2                      | MD                                     | Low flow<br>Conductivity >20,000 µS/cm                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|                                                         |                                        | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 30                       | 360                   | 7                                     | 30                      | 4                    | 85 - 105                                     | 7               | 1          | ID                                         | 7 - 8.4     | NA                   |
|                                                         |                                        | High flow<br>Conductivity ≤20,000 µS/cm                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|                                                         |                                        | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 55                       | 620                   | 14                                    | 100                     | 3                    | 85 - 105                                     | 40              | 0.3        | ID                                         | 7 - 8.4     | NA                   |
| MOOLOOLAH RIVER – lower estuary/enclosed coastal waters |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
| Mooloolah Lower Estuary                                 | MD                                     | Low flow<br>Conductivity >50,000 µS/cm                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|                                                         |                                        | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3                        | 150                   | 6                                     | 14                      | 2                    | 90 - 105                                     | 3               | 2.5        | ID                                         | 8 - 8.4     | NA                   |
|                                                         |                                        | High flow<br>Conductivity ≤50,000 µS/cm                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|                                                         |                                        | 25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 15                       | 300                   | 10                                    | 30                      | 2                    | 90 - 105                                     | 6               | 1.1        | ID                                         | 8 - 8.4     | NA                   |
| MOOLOOLAH RIVER – open coastal waters                   |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
| Open Coastal Waters                                     | HEV                                    | All Flow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                          |                       |                                       |                         |                      |                                              |                 |            |                                            |             |                      |
|                                                         |                                        | 1–2–7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1–1–7                    | 70–100–150            | 1–3–6                                 | 6–10–15                 | 0.3–0.6–1.2          | 95–100–105                                   | 1–1–1           | 5–6–10     | 3–3–5                                      | 8.2–8.3–8.4 | NA                   |

22. Maximum effluent release limits are applied in the EA to ensure minimal impact to the relevant environmental values and water quality objectives of the receiving environment and ongoing environmentally sustainable operation of the ERA.
23. Regular and continued exceedance of maximum effluent release volumes is likely to constitute an impact on the receiving environment, including to identified EVs and WQOs.
24. The department considers that limited studies have been undertaken to determine the assimilative capacity of the surrounding environment is suitable to accept increasing nutrient levels and mass loads in released effluent.
25. The STP flow and effluent dataset provided by Unitywater was limited to a 14-month period between January 2020 and March 2021, which did not allow for a full assessment of STP performance against Water Quality Objectives (WQOs) over a sufficient period.

26. The department's Water Sciences branch obtained and assessed ocean outfall discharge data of effluent released from release point W1 as reported by Unitywater via the Water Tracking and Electronic Reporting System (WaTERS).
27. The assessment confirmed an upward trend (more predominantly since the commissioning of the Moving Bed Bioreactor technology at the STP at the premises) of the following parameters:
  - Ammonia as N (milligrams per litre (mg/L) over the 50th percentile (long term)) average;
  - Biological Oxygen Demand (BOD) (milligrams per litre (mg/L) over the 80th percentile (long-term)) average;
  - Suspended Solids (milligrams per litre (mg/L) over the 80th percentile (long-term)) average;
  - Total nitrogen (milligrams per litre (mg/L)); and
  - Overall daily volumes of effluent released.
28. Monitoring of nutrient concentrations in effluent, such as for Total nutrients (nitrogen and phosphorous), dissolved nutrients (including ammonia, oxidised nitrogen and filterable reactive phosphorous) is limited in the EA conditions, with no prescribed limits for Total Nitrogen (TN) and Total Phosphorus (TP) identified for authorised releases from the premises.
29. The EA currently identifies a release limit for free chlorine, however free chlorine is not sufficient as an indicator for chlorine toxicity. It is expected that chlorine will react with ammonia in forming chloramines that are measured as part of total chlorine. Total chlorine (TCI) and chloramines are considered very toxic and more persistent in the environment than free chlorine.
30. As a result, Water Sciences has recommended that Unitywater continue to monitor nutrient and toxicant concentrations with a commitment to determine appropriate TN, TP and TCI limits for the future (this will be also based on the findings of an ocean Receiving Environment Monitoring Program).
31. The Receiving Environment Monitoring Program (REMP) has monitored the impacts of releases from the STP to the Mooloolah River since 2013 on a monthly basis. Routine monthly monitoring does not necessarily provide for the assessment of the impacts that occur during releases to the Mooloolah River during wet weather and increased influent flows.
32. Information required to enable understanding and assessment of the impacts of current releases on the receiving environmental values is currently incomplete.
33. Other than in recent months, since 2015 there has been no REMP monitoring of the ocean outfall to understand the mixing regimes and transport fate of contaminants resulting from the release of effluent to the ocean environment.
34. Therefore, there is currently insufficient information to satisfactorily understand and assess the potential impacts to the ocean's environmental values in near and far field waters in proximity to the outfall discharge point.
35. On 21 June 2021 Unitywater provided a 'Response to Information Request' issued by the department on 16 March 2021. This response included high-level overview of current and projected future effluent quality performance and potential future augmentation options being considered, including opening of diffuser ports on the ocean outfall in the near term and a new ocean outfall in the medium term.
36. The department acknowledges that Unitywater has taken steps to mitigate and manage bypass releases, including via implementation of strategies such as the Sewerage Overflow Abatement

Program, and is incorporating plant optimisation assessments into master planning such as the Kawana STP Augmentation Options Report (4 June 2021).

37. The department acknowledges that, in opting to divert approximately 8-10 ML of influent per day from the Maroochydhore STP to the Kawana STP, part of Unitywater's reasoning was that discharge to the ocean outfall presented a reduced environmental impact compared to discharge to the Maroochydhore River. However, this diversion would also have reduced the Kawana STP's available capacity for influent from its direct catchment.
38. The department also acknowledges that, in response to refusal of its EA amendment application in late 2021, Unitywater has adjusted its Mooloolah River REMP and re-commenced monitoring of the receiving environment relating to release point W1.
39. However, in summary, the department considers that, given the facts and circumstances detailed above, you have not complied with your general environmental duty and taken all reasonable and practicable measures to prevent or minimise the risk of environmental harm (such as by the effective removal of nutrients and other toxicants from effluent) and have failed to comply with condition KLV4 of the EA.
40. The department considers it reasonable to require you to further investigate the potential levels of impact associated with the current and projected future effluent discharge volumes and nutrient loads into the receiving environment at both W1 and W3 discharge locations in accordance with your general environmental duty and to progress towards compliance with your EA.

## **B. Requirements**

In accordance with this EPO, you are required to do the following:

1. **By 8 weeks from the date of this notice** you must engage independent Appropriately Qualified Persons (AQP) to carry out the requirements of the notice and confirm the engagement to the department in writing to [sunshinecoast.esr@des.qld.gov.au](mailto:sunshinecoast.esr@des.qld.gov.au). The written confirmation of the engagement must include each persons' academic qualification and suitable experience relevant to the scope of work of the investigation each AQP will undertake.
2. **Receiving Environment Monitoring Programs (REMP)**  
**By 16 weeks from the date of this notice** you must ensure that the AQP engaged in requirement 1 develops and implements REMPs in accordance with the following and provides them to the department for review:

### **A. Receiving Environment Monitoring Program Pacific Ocean Outfall (REMP - A)**

**Develop and implement for a minimum of 24 months**, a monitoring program to assess the environmental impact caused as a result of the release of current and increasing nutrient and contaminant loads to the marine receiving environment from release point W1.

The REMP - A must address the issues and concerns raised above and, at a minimum, be developed in accordance with the requirements of the *Receiving Environment Monitoring Program Guideline* (DES 2022). The REMP must include:

- a. Monitoring of:
  - i. test sites (outside of the mixing zone, for example, >200 metres from the diffuser foot print) potentially influenced by the STP release, including of different water types, near potential ecosystems values or recreational values; and
  - ii. suitable reference or 'control' site(s) not likely to be impacted by the STP and for each water type or environmental value.

- b. Monitoring undertaken at sufficient frequency (for example, monthly) and during release to the ocean from release point W1 to allow an assessment of the condition of the receiving water and the potential footprint of contaminants identified in Section A.
- c. Monitoring of surface ambient water quality indicators for sampled and laboratory analysed indicators, and for in-situ measurements including electrical conductivity, dissolved oxygen, turbidity and pH.
- d. Assessment of monitoring data on an annual basis comparing test sites to water quality objectives and site-specific values based on reference/control sites.

**B. Receiving Environment Monitoring Program Mooloolah River (REMP - B)**

**Develop and implement for a minimum of 24 months**, a monitoring program to improve understanding of the effects of releases of contaminants via release point W3 to the Mooloolah River.

The REMP - B must address the issues and concerns raised previously by the department in its Decision on Amendment Application notice issued to you on 14 January 2022, including those identified above and, at a minimum, be developed in accordance with the requirements of the *Receiving Environment Monitoring Program Guideline* (DES 2022).

The REMP - B must include:

- a. Event-based monitoring to enable assessment of impacts that occur during releases to the Mooloolah River during wet weather and increased influent flows.
- b. Monitoring undertaken within the Mooloolah River when release to the river is not occurring to effectively assess the influence of the STP release and influence from catchment runoff on the receiving environment.
- c. Monitoring undertaken within the Mooloolah River to effectively assess the transport, spatial extent and levels of contaminants following releases during all weather conditions and flow conditions.

3. For each monitoring program identified in requirement 2A and 2B above, you must ensure that the AQP includes the following:

- a. A summary of the sampling and monitoring objectives.
- b. Details of sampling methodology, including proposed sampling locations and rationale for the option(s) selected.
- c. Accurate positioning (e.g. using a Global Positioning System (GPS)) and provision of an appropriately scaled map showing the sample locations.
- d. A sampling schedule including frequency, location, timing and identification of any known temporal or spatial variables taken into consideration (e.g. seasonal adjustments).
- e. Quality Assurance and Quality Control (QA and QC), sampling and monitoring precision, and data quality objectives
- f. Contaminant assessment undertaken for all quality characteristics prescribed in Table 12 of the EA as a minimum and must also include TN, DIN, Ammonia, TP and TCI.
- g. Tabulated analytical and Quality Assurance/Quality Control (QA/QC) results of all monitoring and sampling activity(s), including the original certificates of analysis as received.
- h. Periodic (quarterly) review of the sampling regime undertaken to ensure it meets the requirement.

- i. All sampling undertaken in accordance with applicable guidance including, but not limited to the most recent versions of '*Queensland Monitoring and Sampling Manual*', Version 2, June 2018; and
- j. All laboratory analysis is undertaken by a laboratory with National Association of Testing Authorities (NATA) accreditation for the test conducted.
- k. Raw data of all test and receiving environment monitoring sites that is collected and be provided to the department on an annual basis via the Water Tracking and Electronic Reporting System (WaTERS).

**4. STP Optimisation Assessment**

- A. **By 3 months from date of this notice** you must engage an AQP to carry out the following:
- a. An assessment of the effectiveness and hydraulic capability of the current sewerage treatment plant and ALL associated infrastructure at the premises, including the main outfall pipe and effluent diffusers at release point W1, and infrastructure associated with release point W3 into the Mooloolah River under current and projected future loads on the STP. The assessment is to include identification of near, medium, and long-term options to improve STP performance and capacity and achieve a reduction in dry weather day release volume exceedances.
  - b. The determination of current daily peak design capacity of the STP (expressed as both Average Dry Weather Flow in ML/day and peak flow velocity L/s) and identification of any available options that would reduce the frequency of high-flow bypass events.
- B. **By 9 months from the date of this notice** the AQP must conduct an assessment of the sewerage network supplying the Kawana STP and provide a report to the department identifying immediate / near term, medium term and long-term options to, in alignment with those options identified under requirement 4a, support achievement of one or more of the following outcomes:
- i. A reduction in inflow and infiltration into the sewerage network upstream of the STP; and
  - ii. A reduction in dry weather day release volume exceedances.

**5. Sustainable Growth Assessment**

**By 3 months from date of this notice** you must engage an AQP to carry out the following:

- a. Carry out modelling for the infrastructures' capacity and treatment effectiveness for likely future scenarios of expected sewage release volumes associated with all reasonably projected future Equivalent Persons (EP) capacity levels to demonstrate a sustainable load in accordance with identified EPP WQOs.
- b. The assessment and identification of STP optimisation options and recommendation of actions for improvement of effluent quality and reduction of load to, and mitigation of, any adverse impacts caused or likely to be caused to the Mooloolah River and Pacific Ocean receiving environments. The recommendations must include projections for when such improvements could be implemented.

6. **By 13 months after the date of this notice** you must submit an interim report from the AQP to the department providing:

- a. An overview of the monitoring programs implemented as per the REMPs, and a summary and high-level analysis of the monitoring results received to date across each REMP.

- b. The outcome of the STP Optimisation Assessment conducted under requirement 4A.
  - c. The outcome of the Sustainable Growth Assessment conducted under requirement 5.
7. Develop a suitable model and undertake an assessment of the assimilative capacity and mixing of the ocean at the outfall, including but not limited to:
- a. Near field assessment of the diffuser performance and mixing zones for TCI and Ammonia under worse case scenarios and define the maximum spatial extent where concentrations could exceed relevant toxicity water quality guidelines. Include assessment of potential mixing with all diffuser ports in operation and associated increased release capacity.
  - b. Far-field assessment for key water quality parameters including but not limited to total nitrogen, total phosphorus, ammonia and chlorophyll-a. Calibration of the model should be undertaken with a minimum of 12 months data and assessment should be considering current and potential future release water quality and quantity, tide and wind influences, and the locations of the REMP-A. The assessment should consider the sustainable load of nutrients released from W1 such that the spatial extent of influence in comparison to water quality objectives (or site-specific values) is minimised.
8. **By 30 months after the acceptance of the REMP** you must submit an environmental report to the department on the outcomes of requirements 2, 3 and 7 above.

The report must include:

- a. A summary and evaluation of the monitoring data obtained under requirements 2 and 3 of this EPO, including graphical representations showing all historical data and a comparison of data trends.
  - b. Assessment of the ongoing capacity of the receiving waters to sustainably receive contaminant releases including but not limited to the capacity of the receiving waters to sustainably assimilate projected nutrient and contaminant levels and loads obtained under requirement 7.
  - c. Assessment of how the receiving waters have been impacted by effluent releases and comparison of findings between near and further field ocean and river mixing zones and the nominated 'control' site(s) under requirements 2 and 7.
  - d. Assessment of environmental impact from the current release giving consideration of potential impact on relevant environmental values and water quality objectives.
  - e. Identification of proposed release limits at W1 and W3, as a minimum, for TN, TP, Ammonia, Oxidised Nitrogen, Filterable Reactive Phosphorus and TCI based on the assimilative capacity of the receiving waters and treatment performance capability of the STP.
  - f. Development of trigger values for receiving waters for the water quality characteristics prescribed in Table 12 of the EA plus TN, TP, Ammonia, Oxidised Nitrogen, Filterable Reactive Phosphorus and TCI, as a minimum.
9. All reports required by this EPO must be provided to the department by email to [sunshinecoast.esr@des.qld.gov.au](mailto:sunshinecoast.esr@des.qld.gov.au).

### **C. Obligations**

If you propose to dispose of the place or business to which the EPO relates, you **must** advise the buyer of the existence of this EPO.

If you cease to carry out the activity to which this EPO relates, you **must** give written notice of ceasing to carry out the activity to the department within 10 days of ceasing the activity.

**Take notice:**

- the requirements of this order take effect immediately upon service of the order;
- failure to comply with this order is an offence under the EP Act;
- this order remains in force until further notice from the administering authority.

## **D. Penalty**

It is important that you know the impact to you personally as an individual or as a corporation for not meeting your obligations.

Failure to comply with an EPO is an offence.

- The maximum penalty for wilfully contravening an EPO is 6250 penalty units, totalling \$ 834,062 or five years imprisonment for an individual or \$ 4,170,312 for a corporation.
- The maximum penalty for contravening an EPO is 4500 penalty units, totalling \$ 600,525 for an individual or \$ 3,002,625 for a corporation.

Failure to provide written notice to the buyer of the existence of the order is an offence.

- The maximum penalty is 50 penalty units, totalling \$ 33,362, for an individual or \$ 166,812 for a corporation

Failure to provide written notice to the department within 10 business days of ceasing the activity to which an environmental protection order relates is an offence.

- The maximum penalty is 50 penalty units, totalling \$33,362 for an individual or \$ 166,812 for a corporation.

Section 3 of the *Penalties and Sentences Regulation 2015* prescribes the monetary value of a penalty unit.

## **E. Reviews and appeals**

The provisions regarding reviews of decisions and appeals are found in sections 519 to 539 of the EP Act.

A person who is dissatisfied with an original decision made by the Department of Environment and Science (the department) may apply to have that decision internally reviewed.

Information about initiating an appeal in relation to this notice is contained within the [Internal Reviews and Appeals Information Sheet](#) (available at [www.qld.gov.au](http://www.qld.gov.au) using the publication number ESR /2015/1742 as a search term)

A request for review or appeal is to be made using the approved form '[Application for review of original decision](#)' (available at [www.qld.gov.au](http://www.qld.gov.au) using the publication number ESR/2015/1573 as a search term.

Applications for reviews are to be sent to Permit and Licence Management, Department of Environment and Science: via email at [palm@des.qld.gov.au](mailto:palm@des.qld.gov.au) , or by mail to the following address: GPO. Box 2454, Brisbane, QLD, 4001.

Where an application has been made for a decision to be reviewed, the applicant may also apply to the relevant court for a stay of the decision to secure the effectiveness of the review.

## Notice Environmental Protection Order

Once the original decision has been reviewed, a person who is dissatisfied with the review decision may be able to appeal against that decision to the relevant court within 22 business days after receiving notice of the review decision.

A person whose interests are or would be adversely affected by a decision of the department may be able to request a statement of reasons for a decision or a statutory order review under the *Judicial Review Act 1991*.

You may have other legal rights or obligations and should seek your own legal advice.

Pursuant to section 540 of the Act, the department is required to maintain a register of certain documents and information authorised under the Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the Act. There is no general discretion allowing the department to withhold documents or information required to be kept on the public register. For more information on the department's public register, search 'public register' at [www.qld.gov.au](http://www.qld.gov.au). For queries about privacy matters please email [privacy@des.qld.gov.au](mailto:privacy@des.qld.gov.au) or telephone 13 74 68.

Should you have any queries in relation to the notice, please contact Mark Watson on 5459 6133 .



Signature

Tim Brain

Delegate of the Chief Executive

Department of Environment and Science

*Environmental Protection Act 1994*

9/12/2022

Date

**Enquiries: Mark Watson**

**COMPLIANCE CENTRE: Sunshine Coast**

Ph: (07) 5459 6132

Email: [sunshinecoast.esr@des.qld.gov.au](mailto:sunshinecoast.esr@des.qld.gov.au)

