

Model operating conditions

ERA 1—Aquaculture

Version history

Version	Date	Description of changes
1.00	19 February 2021	Original version.

Prepared by: Coastal and Marine Assessment, Department of Environment and Science

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February 2021

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Context

This document provides guidance on the model operating conditions that may be applied to an environmental authority for environmentally relevant activity (ERA) 1 if a site specific application is made for thresholds 1 or 2. Those thresholds are cultivating or holding marine, estuarine or freshwater organisms in enclosures that are on land and have a total area of more than 100m².

It is important to note that there are number of exemptions in the legislative framework for ERA 1 which means that not all aquaculture operations require an environmental authority. An environmental authority is not required if the aquaculture activity involves cultivating or holding marine, estuarine or freshwater organisms:

- in an aquaculture for display purposes only; or
- in an enclosure from which no water, other than uncontaminated stormwater, can be released to waters; or
- if the marine, estuarine or freshwater organisms receive no augmented food supply.

Only one of the above exemptions need to be met for an environmental authority to not be required. For example, a facility could cultivate estuarine organisms with an augmented food supply but operate a completely closed loop system with no release of contaminated water to waters. Conversely, a facility could cultivate organisms in an open loop system with releases to waters but not provide any additional food. These activities will not require an environmental authority for ERA 1.

Key terms and/or phrases used in this document are defined in the definitions section and **bolded** throughout this document.

For each condition you will find guidance on the intent and how to comply. These sections provide basic information on the reason for inclusion of a condition and what compliance may or may not look like. You may find this information helpful in managing your **activity** to ensure that you remain in compliance with your approval conditions. However, this additional information will not form part of your final approval conditions and is provided in this document as guidance only. You must decide on the level of risk associated with your **activity** and ensure that the measures implemented are appropriate to manage the environmental outcome or particular requirement set out within each condition of your approval.

1 Introduction

The *Environmental Protection Act 1994* (EP Act) provides for the granting of environmental authorities for aquaculture operations (ERA 1).

These model operating conditions provide a framework of conditions that will apply to site specific applications for ERA 1, thresholds 1 and 2, across the State of Queensland.

In assessing applications for ERA 1, the **administering authority** must address the regulatory requirements set out in the Environmental Protection Regulation 2019 and the standard criteria contained in the EP Act. The **administering authority** will consider the regulatory requirements in the context of information about the environmental impacts of a project, provided through application documentation for an environmental authority.

Conditions in your environmental authority will generally state what is and what is not permitted as part of the **activity**. They will generally relate to the operation of the **activity** and may also cover rehabilitation requirements. Where you also require a development permit for your **activity** under the *Planning Act 2016*, the conditions in your environmental authority will not deal with land-use issues, as these will be assessed and conditioned in your development approval.

An environmental authority approves the carrying out of an **activity** and does not approve any environmental harm unless a condition stated by the authority specifically states that an action or event can occur.

The **administering authority** may amend the conditions in this guideline to ensure that they are current and appropriate (although conditions in your approval will only change in the circumstances set out in the EP Act).

2 How to use this guideline

2.1 New project applications

These model operating conditions provide a framework of conditions that will be applicable to all new environmental authorities for ERA 1, thresholds 1 and 2.

As the model operating conditions are a framework only, additional conditions can be applied at the discretion of the **administering authority** to address risks that are specific to a particular operation or a particular site (e.g. where specific **environmental values** may be impacted). Also, if a particular model operating condition does not apply to an operation, then it will not form part of the conditions placed on the environmental authority.

The applicant can also request the addition, removal or replacement of conditions to tailor the environmental authority to their particular operation. These requests are to be made through a site specific application for an environmental authority and supported by a justification for the change requested.

In some circumstances, payment of financial assurance may also be required. If financial assurance is required, it will be stated as an additional condition on the environmental authority.

2.2 Amendments

When making an amendment to alter **activities** that were approved prior to the development of these model operating conditions you are strongly encouraged to also request to update your environmental authority with these conditions. However, if you do not wish to align your whole environmental authority with these conditions your amendment application will only change any conditions relevant to the extent of your amendment request.

3 Obligations under the EP Act

At all times you must meet your obligations under the EP Act. The following information is provided to help you understand some of the key environmental obligations under the EP Act which may relate to the operation of your **activity**. This is not an exhaustive list of all of the environmental obligations.

Environmental obligations which you must comply with include:

1. general environmental duty—section 319

2. duty to notify of environmental harm—sections 320-320G.

3.1 General environmental duty

A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm¹. This is a person's general environmental duty.

You have the responsibility to work out what you need to do to make sure that you manage your environmental risk and achieve the outcomes set out in your environmental authority.

Failure to comply with the general environmental duty is not, itself, an offence. However, causing an **environmental nuisance** or causing serious or material environmental harm is an offence unless you can prove:

- that the environmental harm was not unlawful; and
- you have complied with the general environmental duty.

Over time it may also be necessary to review the contaminant release limits from aquaculture **activities** with the aim of reducing them if new technologies or better science becomes available.

In keeping with the general environmental duty, it is recommended that at least every five years, you investigate additional treated water reuse measures and/or treatment technologies to further reduce the release of contaminants to waters. The investigations should inform the implementation of cost effective additional or alternative treatment technologies or re-use options.

You should inform the **administering authority** of any outcomes of the investigations, including proposed additional or alternative treatment, proposed alternative or increased re-use options, or justification where re-use options are not adopted.

3.2 Duty to notify of environmental harm

The duty to notify requires a person to give notice where serious or material environmental harm is caused or there is a risk of such harm, and that harm is not authorised by the **administering authority**.

For more information on the duty to notify requirements, including who must be notified, how and when to notify, refer to the guideline *The duty to notify of environmental harm* (available at www.qld.gov.au using the publication number ESR/2016/2271).

4 Offences under the legislation

This section sets out some of the offences that you should be aware of as you are carrying out your **activity**. If you commit one of these offences, you could for example, be fined, prosecuted, or required by the **administering authority** to take a particular action. This list does not include all of the environmental offences under the legislation.

If you do commit an offence while carrying out your **activity**, the **administering authority** will take enforcement action in accordance with its [Enforcement guidelines](#).

4.1 Contravention of a condition of an environmental authority

It is a legal requirement that you comply with the conditions in your environmental authority. You must also ensure that anyone operating under the environmental authority also complies with the conditions. This might include contractors visiting the site temporarily or transport operators loading and unloading materials on site, and all staff employed at the site. Multiple people may be prosecuted if an offence is committed.

If you think that you have breached a condition of your environmental authority, it is your responsibility to correct

¹ Extract from section 319 (1) of the EP Act.

the problem and bring yourself back into compliance with the condition. You should not wait for the **administering authority** to tell you what do to. You may also be legally required to contact the **administering authority** by the conditions in your environmental authority or the duty to notify requirements under the EP Act.

Penalties for a breach of a condition of an environmental authority vary from penalty infringement notices through to the issuing of statutory notices—such as an environmental evaluation, transitional environmental program or an environmental protection order. In serious cases the **administering authority** may initiate court proceedings for a court order or prosecute those responsible for the breach.

4.2 Causing material or serious environmental harm

Material environmental harm has the meaning as defined in section 16 of the EP Act. Material environmental harm is environmental harm that costs more than \$5,000 to clean up, or that causes (or has the potential to cause) more than \$5,000 worth of damage to property.

Serious environmental harm has the meaning as defined in section 17 of the EP Act. In summary, it is harm that is irreversible; has a high impact or widespread effects to the environment; is caused to an area of high conservation significance; or causes clean-up costs or property damage worth more than \$50,000.

Material and serious environmental harm excludes **environmental nuisance**.

4.3 Causing environmental nuisance

Environmental harm includes **environmental nuisance**. **Environmental nuisance** is unreasonable interference with an **environmental value** caused by aerosols, fumes, light, noise, odour, particles or smoke. It may also include an unhealthy, offensive or unsightly condition because of contamination. For activities that need an environmental authority, the most common causes of **environmental nuisance** are dust, noise and odour.

4.4 Depositing a prescribed contaminant in waters

Prescribed water contaminants includes a wide variety of contaminants, from inert substances such as earth, clay, gravel and sediment to substances such as chemicals, contaminants with a high or low pH, construction and building waste, gas, oil and sewage. For a full list of **prescribed water contaminants** see Schedule 10 of the Environmental Protection Regulation 2019.

It is your responsibility to ensure that **prescribed water contaminants** do not enter a waterway roadside gutter or stormwater drain. This includes making sure that the prescribed water contaminants are not left in a position where they could enter one of those places. You also need to ensure that stormwater falling on, or running across your site does not leave the site contaminated. Where stormwater contamination occurs you must ensure that it is treated to remove contaminants. You should also consider where and how you store material used in your processes onsite to reduce the chance of water contamination.

5 Model operating conditions

Model operating conditions applicable to All ERA 1 (1 & 2) activities	
General	
G1	<p>Activities conducted under this environmental authority must be conducted in accordance with the following:</p> <p>a) <INSERT extent, nature or limitations of the activity approved and if relevant the maximum limit> b) <REPEAT for all relevant activities approved>.</p>
G2	Any contravention of a condition of this environmental authority must be reported to the administering authority as soon as practicable, and no more than 24 hours after becoming aware of the contravention.
G3	A report under condition G2 that relates to a release to waters must be submitted via WaTERS , unless otherwise agreed by the administering authority .
G4	Records of any contravention of this environmental authority must be made including full details of the contravention and any subsequent actions taken.
G5	All records required by the conditions of this environmental authority must be kept for a minimum of five years and all environmental monitoring results and underlying raw data, must be kept until surrender of this environmental authority.
G6	All records required by the conditions of this environmental authority must be provided to the administering authority upon request by the time and in the format requested.
G7	All reasonable and practicable measures must be taken to prevent or minimise any environmental harm caused by the activity .
G8	<p>Written procedures must be developed and documented within three months of the environmental authority taking effect that:</p> <p>a) identify all potential risks to the environment from the activity, including during and outside routine operations, during closure and in an emergency; and</p> <p>b) identify measures to prevent or minimise the potential for environmental harm for each of the potential risks identified; and</p> <p>c) establish an inspection and maintenance program for plant and equipment including calibration and servicing that is in accordance with manufacturer's instructions; and</p> <p>d) establish a staff training program on obligations under this environmental authority and the <i>Environmental Protection Act 1994</i> to be conducted as part of staff inductions and at least annually; and</p> <p>e) establish processes to review environmental risks, incidents, performance and complaints.</p>

G9	Written procedures required by condition G8 must be: a) implemented; and b) reviewed at least annually; and c) provided to the administering authority upon request at the time and in the format requested.
G10	Plant and equipment necessary to comply with the conditions of this environmental authority must be installed, operated and maintained: a) in a proper and effective manner; and b) in accordance with any written procedures developed under condition G8 for the plant and equipment.
G11	Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system .
G12	All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses. The only exception to this condition is for <i>in situ</i> monitoring of <INSERT relevant indicator>.
G13	All monitoring required by this environmental authority must be recorded.
G14	All monitoring required by this environmental authority must be carried out and interpreted by an appropriately qualified persons(s) .
G15	Details of all environmental complaints received must be recorded including: a) date and time the complaint was received; and b) name and contact details of the complainant when provided by the complainant; and c) nature and details of the complaint; and d) investigations undertaken; and e) conclusions formed; and f) actions taken.
G16	When required by the administering authority , monitoring must be undertaken in the manner prescribed by the administering authority to investigate any alleged environmental harm caused by the activity .
G17	Any report, results and underlying raw data, of monitoring required by condition G16 must be recorded.
G18	Prior to the commencement of the activity , a receiving environment monitoring program ¹ for the activity must be implemented. ¹ Note: The receiving environment monitoring program is subject to review and amendment as required by changing regulation, monitoring results or administering authority recommendations.

<p>G19</p>	<p>The receiving environment monitoring program (REMP) must include at least the following:</p> <ol style="list-style-type: none"> 1. Clearly stated aims and objectives of the receiving environment monitoring program. 2. Description of operation of the activity including: <ol style="list-style-type: none"> a. Operational procedures detailing operational rules, accountabilities, recording and reporting requirements and actions to be taken in the event of non-conformance with the procedure for the following aspects of the activity: <ol style="list-style-type: none"> i. Water management (pond water and discharges); ii. Organic waste (sludge) management (handling, storage and monitoring); iii. Land management (vegetation, sediment and erosion, acid sulfate soils, wildlife, weed and feral animals, fire and cultural heritage); iv. Hazardous substances and chemicals management; v. Waste management; vi. Air emissions (odour and noise); and vii. Complaints management. b. Duration and timing of the growing and harvest cycles (if applicable); c. Timing and procedure for inspecting any waste disposal area (if applicable) and drainage systems. 3. A monitoring program¹ to monitor the effects of the activity on the receiving environment regularly and while wastewater is being discharged from the site, that includes: <ol style="list-style-type: none"> a. Suitable test sites within the receiving waters² that are potentially impacted by the release; b. Control sites where relevant background or reference conditions can be established; and c. Monthly sampling not including periods during or immediately after rainfall. 4. A program for annual assessment and reporting that complies with the requirements of conditions G26 and G27. <p>¹The monitoring program should be developed using the latest version of the administering authority's Receiving Environment Monitoring Program Guideline (ESR/2016/2399).</p> <p>²For the purposes of the REMP, the receiving waters are the waters of <INSERT Receiving waters>. The REMP should encompass any sensitive receiving waters or environmental values that will potentially be affected by an authorised release from the facility.</p> <p><INSERT AND ADD RELEVANT NUMBERING the following if applicable to the receiving environment and the nature of the release></p> <ul style="list-style-type: none"> • A program to assess seagrass in accordance with the "Guidance on Seagrass Monitoring" set out in the administering authority's Monitoring and Sampling Manual; • A program to assess any change to coastal processes (including erosion) due to wastewater releases and impacts to tidal prism. • A detailed description of the assessment methodology to provide data in relation to trigger values that will define alert levels. • Clearly set out data handling and evaluation procedures that demonstrate how exceedances of alert levels will be determined. • Management actions to be initiated if alert levels are exceeded. <p><INSERT AND ADD RELEVANT NUMBERING additional site-specific requirements as necessary></p>
<p>G20</p>	<p>The receiving environment monitoring program must be submitted to the administering authority at least 20 business days prior to the commencement of the activity and amended in accordance with any comments made by the administering authority.</p>

G21	If the receiving environment monitoring program is amended at any time, the amended program must be submitted to the administering authority at least 20 business days prior to commencing activities under the amended receiving environment monitoring program .
G22	Any comments made by the administering authority on the amended receiving environment monitoring program provided in accordance with condition G21 must be addressed to the satisfaction of the administering authority prior to implementing the amended receiving environment monitoring program .
G23	Condition G21 and G22 apply each time the receiving environment monitoring program is amended.
G24	The activity must not be carried out unless the required financial assurance is held by the administering authority for the activity .
G25	If the administering authority increases the amount of financial assurance , the additional financial assurance must be given to the administering authority within 28 days of receiving written notice of the increase.
G26	An annual monitoring report must be prepared and submitted to the administering authority by 30 November each year, for the preceding financial year .
G27	<p>The annual monitoring report required by condition G26 must include:</p> <ul style="list-style-type: none"> a) Findings as a result of the receiving environment monitoring program for the period; and b) Calculation of annual mass load of both nitrogen and phosphorus in accordance with condition WT5; and c) A summary of the previous 12 months monitoring results including graphical representations identifying relevant indicator limits, if this data has not already been reported to the WaTERS database; and d) An outline of actions taken or proposed to minimise any environmental risk identified from, for example, monitoring and environmental complaints; and e) Calculations of the volume and frequency of wet weather storage overflows, where applicable. <p><i><INSERT the following, and update numbering, if a net mass load is sought ></i></p> <ul style="list-style-type: none"> b) Calculation of annual net mass load of both total nitrogen and total phosphorus in accordance with condition WT5. <p><i><INSERT the following, and update numbering, if an offset is sought ></i></p> <ul style="list-style-type: none"> b) Calculation of annual mass load (offset) of both total nitrogen and total phosphorus in accordance with condition WT5. <p><i><INSERT other site-specific details the annual monitoring report needs to contain, and update numbering></i></p>
G28	Unless otherwise specified in a condition of this environmental authority, all records required to be submitted to the administering authority under this environmental authority, must be submitted to:

	<p>1300 130 372 (option 2) / pollutionhotline@des.qld.gov.au (for notifications under condition G2 that does not relate to a release to waters); or</p> <p>palm@des.qld.gov.au; or</p> <p>Permit and Licence Management Department of Environment and Science GPO Box 2454 Brisbane QLD 4001</p>
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Air	
A1	Odours or airborne contaminants from the activity must not cause environmental nuisance at any sensitive place or commercial place .
Land	
L1	Contaminants from the activity must not be released to land .
L2	Treatment and management of acid sulfate soils must comply with the latest edition of the Queensland Acid Sulfate Soil Technical Manual.
L3	Rehabilitation of the site is required to achieve a safe, stable and non-polluting landform.
Acoustic	
N1	Noise from the activity must not cause environmental nuisance to any sensitive place or commercial place .
Waste	
W1	Other than as permitted by this environmental authority, all waste generated by the activity must be lawfully reused or recycled, and/or lawfully removed to a facility that can lawfully accept the waste.
W2	The administering authority must be notified as soon as practicable, but no more than 24 hours after becoming aware of any disease outbreak requiring treatment and/or drainage of ponds .
W3	Where diseased organisms and/or affected water require offsite disposal the following records must be kept: a) the date, quantity and type of waste disposed of; and b) name of the waste transporter and/or disposal operator that removed the waste; c) details of suspected or confirmed disease; and d) the intended treatment and/or disposal destination of the waste.
W4	Sludge removed from any ponds must be stored and/or disposed of in a manner that does not cause or have the potential to cause a release of contaminants.
W5	Any diseased, or potentially diseased, organisms and affected water removed from the ponds for disposal onsite must be disposed of in a separate lined and bunded disposal area.

W6	At the end of each day that diseased, or potentially diseased, organisms and affected water have been placed in the waste disposal area, the organisms and affected water must be covered with at least 200mm of earth.
W7	If organisms and/or affected water are placed in a waste disposal area, the following records must be kept: a) date placed; and b) quantity of organism and/or affected water disposed; and c) suspected or confirmed disease; and d) details of any treatment applied to neutralise disease.
Water	
WT1	Other than as permitted by this environmental authority, contaminants from the activity must not be released to waters .

WT2	<p>Contaminants must only be released to surface waters where:</p> <p>a) they are from the discharge locations; and b) the release limits for each indicator are met at the discharge locations; and c) monitoring at all monitoring locations and at the frequency;</p> <p>as per <i>Table 1 – Contaminant monitoring, discharge location and release limits</i>; and</p> <p>d) the associated requirements are complied with.</p> <p>Table 1 – Contaminant monitoring, discharge location and release limits</p> <table border="1" data-bbox="261 633 1463 1559"> <thead> <tr> <th rowspan="2">Monitoring location</th> <th rowspan="2">Discharge location</th> <th rowspan="2">Indicator</th> <th colspan="3">Release limit</th> <th rowspan="2">Minimum monitoring frequency</th> </tr> <tr> <th>Minimum</th> <th>Mean</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>pH</td> <td></td> <td></td> <td></td> <td rowspan="5">Daily</td> </tr> <tr> <td></td> <td></td> <td>Dissolved oxygen</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Turbidity</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Electrical conductivity</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Temperature</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Total nitrogen (mg/L)</td> <td></td> <td></td> <td></td> <td rowspan="5">Weekly</td> </tr> <tr> <td></td> <td></td> <td>Ammonia (mg/L)</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Oxidised nitrogen (mg/L)</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Total phosphorus (mg/L)</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Filtered reactive phosphorus (mg/L)</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Total suspended solids (mg/L)</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Associated requirements</p> <ol style="list-style-type: none"> <INSERT timeframes for which mean is to be calculated. For example, it might be calculated weekly as a rolling mean over 6 weeks (short-term), or in blocks defined by designated dates, such as a 52-week mean (long-term) for a calendar or financial year, or defined by the commencement (start date) of the environmental authority> Monitoring must be carried out in accordance with the methods prescribed in the current edition of the Department of Environment and Science Monitoring and Sampling Manual. Water samples must be representative of the general condition of the water body. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristics. Monitoring must be undertaken during a release and at the frequency stated. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual. Ammonia, NO_x and filterable reactive phosphorus (FRP) must be measured when total nitrogen and total phosphorus are monitored. 	Monitoring location	Discharge location	Indicator	Release limit			Minimum monitoring frequency	Minimum	Mean	Maximum			pH				Daily			Dissolved oxygen						Turbidity						Electrical conductivity						Temperature						Total nitrogen (mg/L)				Weekly			Ammonia (mg/L)						Oxidised nitrogen (mg/L)						Total phosphorus (mg/L)						Filtered reactive phosphorus (mg/L)						Total suspended solids (mg/L)				
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WT3	<p>All water quality monitoring data collected under this authority must be provided to the administering authority annually via WaTERS and in the specified electronic format requested.</p>																																																																															

WT4	<p>The annual mass load of total nitrogen and total phosphorus released to waters from <INSERT release point> must comply with the limits listed in <i>Table 2 – Contaminant release to waters – annual mass load limits</i>.</p> <p>Table 2 – Contaminant release to waters – annual mass load limit</p> <table border="1" data-bbox="261 495 1465 667"> <thead> <tr> <th data-bbox="261 495 564 555">Release point</th> <th data-bbox="564 495 863 555">Indicator</th> <th data-bbox="863 495 1161 555">Limit type</th> <th data-bbox="1161 495 1465 555">Release limit</th> </tr> </thead> <tbody> <tr> <td data-bbox="261 555 564 616"></td> <td data-bbox="564 555 863 616">Total nitrogen</td> <td data-bbox="863 555 1161 616">Maximum</td> <td data-bbox="1161 555 1465 616">kg</td> </tr> <tr> <td data-bbox="261 616 564 674"></td> <td data-bbox="564 616 863 674">Total phosphorus</td> <td data-bbox="863 616 1161 674">Maximum</td> <td data-bbox="1161 616 1465 674">kg</td> </tr> </tbody> </table>	Release point	Indicator	Limit type	Release limit		Total nitrogen	Maximum	kg		Total phosphorus	Maximum	kg
Release point	Indicator	Limit type	Release limit										
	Total nitrogen	Maximum	kg										
	Total phosphorus	Maximum	kg										
WT5	<p>The yearly sum of daily release volume (ML) and annual mass load of total nitrogen and total phosphorus released to waters must be calculated for each financial year.</p>												
WT6	<p>The total quantity of water released from <INSERT release point> during any day must not exceed <INSERT value>.</p>												
WT7	<p>The total quantity of water released from <INSERT release point> during any calendar year must not exceed <INSERT value>.</p>												
WT8	<p>The quantity of water released from <INSERT release point> must be determined, using a method with an accuracy of at least <INSERT accuracy required e.g. +/-5%> of the actual amount released, and recorded.</p>												
WT9	<p>Notwithstanding any other condition of this environmental authority, any release of contaminants to waters must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter.</p>												
WT10	<p>Notwithstanding any other condition of this environmental authority, wastewater must be directed from the discharge structure in a manner that does not erode or otherwise disturb mangrove vegetation, the stream banks or the habitat in general.</p>												
WT11	<p>All ponds, channels and containment structures used for the storage, use or treatment of aquaculture waters must be constructed and maintained:</p> <ol style="list-style-type: none"> <li data-bbox="261 1525 1481 1585">to minimise the likelihood of any release of water through the bed or banks of the pond, channels or containment structures to any waters; and <li data-bbox="261 1585 1481 1621">to ensure the stability of the ponds, channels or containment structures; and <li data-bbox="261 1621 1481 1682">in accordance with the relevant edition of the Queensland Government guideline titled ‘Guideline for constructing and maintaining aquaculture containment structures’. 												
WT12	<p>Contaminants from the activity must not be released to groundwater or to a location where they are likely to release to groundwater.</p>												

5.1 Additional model operating conditions – net mass load

These conditions will apply if a net mass load is proposed. Conditions WT4 and WT5 will replace the equivalent conditions in section 5.0. Conditions WTNM1 – WTNM4 may apply in addition to the conditions in section 5.0.

A net mass load may be appropriate for facilities where nutrient concentrations in intake waters are higher than discharge waters for part of the year. A net mass load in this situation enables an annual approach to load calculation, which recognises the improvement in water quality during part of the year. In certain environments, it may mean that a facility is able to operate in a location that would otherwise not be feasible.

A net mass load will only be available where intake and discharge occur into the same waterway to ensure an improvement in the water quality of the receiving environment. This approach to load calculation requires additional conditions for monitoring of intake waters (to allow for calculation of the mass load) and additional impact monitoring to ensure there are no negative impacts to the receiving environment due to background creep.

If seeking a net mass load, it is strongly recommended that you seek a pre-lodgement meeting to discuss your proposal before submitting an application. To arrange a free pre-lodgement meeting with the department, contact Permit and Licence Management (PaLM) on 13 74 68 or at palm@des.qld.gov.au.

Water													
WT4 (net mass load)	<p>The annual net mass load of total nitrogen and total phosphorus released to waters from <i><INSERT release point></i> must comply with the limits listed in <i>Table 2 – Contaminant release to waters – annual net mass load limits</i>.</p> <p>Table 2 – Contaminant release to waters – annual net mass load limit</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Release point</th> <th style="width: 25%;">Indicator</th> <th style="width: 25%;">Limit type</th> <th style="width: 25%;">Release limit</th> </tr> </thead> <tbody> <tr> <td></td> <td>Total nitrogen</td> <td>Maximum</td> <td>kg</td> </tr> <tr> <td></td> <td>Total phosphorus</td> <td>Maximum</td> <td>kg</td> </tr> </tbody> </table>	Release point	Indicator	Limit type	Release limit		Total nitrogen	Maximum	kg		Total phosphorus	Maximum	kg
Release point	Indicator	Limit type	Release limit										
	Total nitrogen	Maximum	kg										
	Total phosphorus	Maximum	kg										
WT5 (net mass load)	<p>The yearly sum of daily release volume (ML) and annual net mass load of total nitrogen and total phosphorus released to waters must be calculated for each financial year.</p>												
WTNM1	<p>The intake water at location <i><INSERT location of intake water></i> must be monitored for the indicators and at the frequency specified in Table 1.</p>												
WTNM2	<p>The quality of the receiving waters must be monitored at the monitoring points specified in <i>Table 3 - Receiving water impact monitoring points</i> for each indicator and at the monitoring frequency stated in <i>Table 4 - Receiving waters contaminant trigger level</i>.</p> <p>Table 3 - Receiving water impact monitoring points</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Monitoring points¹</th> <th style="width: 25%;">Location description</th> <th style="width: 20%;">Latitude (decimal degree, GDA94)</th> <th style="width: 35%;">Longitude (decimal degree, GDA94)</th> </tr> </thead> <tbody> <tr> <td colspan="4">Impact monitoring points</td> </tr> <tr> <td>Monitoring point DS1</td> <td><i><INSERT location description, e.g. approx. 2 km downstream of</i></td> <td></td> <td></td> </tr> </tbody> </table>	Monitoring points ¹	Location description	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)	Impact monitoring points				Monitoring point DS1	<i><INSERT location description, e.g. approx. 2 km downstream of</i>		
Monitoring points ¹	Location description	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)										
Impact monitoring points													
Monitoring point DS1	<i><INSERT location description, e.g. approx. 2 km downstream of</i>												

	discharge>			
Monitoring point DS2				
Monitoring point DS3				

Table 4 - Receiving waters contaminant trigger level

Indicator ¹	Median trigger limits ²			Monitoring frequency
	DS1	DS2	DS3	
Total nitrogen (µg/L)				Monthly, on outgoing tide ³
Total phosphorus (µg/L)				
Suspended solids (mg/)				
Chlorophyll-a (µg/L)				

¹ Indicators taken at each monitoring point should include pH, dissolved oxygen (percent saturation), turbidity, electrical conductivity, temperature, ammonia (as N), oxidise nitrogen (as N) and filterable reactive phosphorus (as P).

² Median must be calculated from all monthly monitoring results taken over a 12-month calendar period.

³ Samples must be taken during any month where discharge occurs from <INSERT release points>. A minimum of <INSERT Minimum number of samples depending on activity, for example 8> samples to be taken from each monitoring point each calendar year.

WTNM3	<p>If monitoring calculated over a 12 month period ending <INSERT end date, for example 30 June> at a monitoring point in <i>Table 3 - Receiving water impact monitoring points</i> shows an exceedance of a median trigger limit for any indicators in <i>Table 4 - Receiving waters contaminant trigger level</i>, an investigation must be undertaken that includes the following:</p> <ul style="list-style-type: none"> a) A Comparison of the monitoring to scheduled water quality objectives, historical monitoring and water quality measurements from reference sites to ascertain the cause of the limit exceedance; and b) A determination of the nutrient release load and concentrations from <INSERT discharge location(s)> during the period of the exceedance and compare this to release concentration and load limits; and c) Propose methods to reduce the volume and concentration of contaminants in wastewater released from <INSERT discharge location(s)> to achieve receiving environment trigger levels.; and d) If median of quality characteristics of the receiving water at impact monitoring points, calculated over a second consecutive 12 month period, exceed any of the median trigger limits specified in <i>Table 4 - Receiving waters contaminant trigger level</i>, revised discharge characteristics must be proposed for <INSERT discharge location(s)>, including release concentrations and load limits, which will ensure receiving water contaminant trigger levels are not exceeded in the future.
WTNM4	<p>A report of the investigation carried out under condition WTNM3 must be provided to the administering authority via WaTERS within 28 days of completion of the investigation.</p>

5.2 Additional model operating conditions – offset

These conditions will apply, in addition to the conditions set out in section 5.0, if a **nutrient offset** is proposed. Conditions WT4 and WT5 will replace the equivalent conditions in section 5.0. Conditions WTO1 – WTO6 may apply in addition to the conditions in section 5.0.

The quality of intake waters is one of the key reasons Queensland is an attractive location to undertake Aquaculture. To retain the clean, green and safe reputation as a definite marketing advantage in local and international markets, it is crucial to the long-term sustainability of the industry to retain the high standards of our natural environment.

Recognising the constraints of on-site treatment, the offset policy has been developed to broaden the options available to Environmental Authority holders in reducing the impacts of the activity on the receiving environment. Please note, before considering an offset, impacts must be first avoided using all reasonable prevention and mitigation measures in accordance with the management hierarchy under the Environmental Protection (Water and Wetland Biodiversity) Policy 2019. Overall, it must be demonstrated that the use of an offset will result in improved water quality in the receiving environment.

The use of an offset requires additional Environmental Authority conditions to capture the way the annual mass load is calculated and additional reporting to review the operation of the offset to ensure it is delivering the anticipated benefit to the receiving environment. Some examples of information required for an offset proposal is provided in the ‘How to Comply’ for condition WT4 (offset) below and further detail on the policy is available in the following location: https://environment.des.qld.gov.au/__data/assets/pdf_file/0033/97845/point-source-wq-offsets-policy-2019.pdf.

If seeking an offset, it is strongly recommended that you seek a pre-lodgement meeting to discuss your proposal before submitting an application. To arrange a free pre-lodgement meeting with the department, contact Permit and Licence Management (PaLM) on 13 74 68 or at palm@des.qld.gov.au.

Water													
WT4 (offset)	<p>The annual mass load (offset) of total nitrogen and total phosphorus released to waters from <i><INSERT release point></i> must comply with the limits listed in <i>Table 2 – Contaminant release to waters – annual mass load limits</i>.</p> <p>Table 2 – Contaminant release to waters – annual mass load (offset) limit</p> <table border="1"> <thead> <tr> <th>Release point</th> <th>Indicator</th> <th>Limit type</th> <th>Release limit</th> </tr> </thead> <tbody> <tr> <td></td> <td>Total nitrogen</td> <td>Maximum</td> <td>kg</td> </tr> <tr> <td></td> <td>Total phosphorus</td> <td>Maximum</td> <td>kg</td> </tr> </tbody> </table>	Release point	Indicator	Limit type	Release limit		Total nitrogen	Maximum	kg		Total phosphorus	Maximum	kg
Release point	Indicator	Limit type	Release limit										
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	Total phosphorus	Maximum	kg										
WT5 (offset)	The yearly sum of daily release volume (ML) and annual mass load (offset) load of total nitrogen and total phosphorus released to waters must be calculated for each financial year .												
WTO1	The quarterly mass load of total nitrogen and total phosphorus released to waters must be calculated and submitted to the administering authority within one month of the end of the quarter to which it relates for the first <i>< INSERT timeframe e.g. two (2) years ></i> years of operation.												
WTO2	An offsite nutrient reduction action must be undertaken in accordance with <i><INSERT approved offset proposal></i> .												
WTO3	A report reviewing the effectiveness of the offsite nutrient reduction action must be prepared by an appropriately qualified person .												

WTO4	<p>The report required by condition WTO3 must:</p> <ul style="list-style-type: none"> a) be based on monitoring results obtained during the delivery of the offsite nutrient reduction action; and b) with reference to the results of the receiving environment monitoring program required under condition G19 during the time the nutrient offset has been in place, determine if the delivery of the offsite nutrient reduction action has been effective in preventing or mitigating harm from releases of nutrients from the activity on the receiving environment; and c) provide recommendations for the continued delivery of an offsite nutrient reduction action following <i><INSERT date 1 month prior to the offset program expiry, or date 4 years and 11 months issue, whichever is sooner></i> or outline how the annual mass load (offset) will be met without the nutrient offset.
WTO5	<p>The report required by condition WTO3 must be submitted to the administering authority by <i><INSERT date 1 month prior to the offset program expiry, or date 4 years and 11 months issue, whichever is sooner></i>.</p>

6 Guidance on model operating conditions

General	
G1	<p>Activities conducted under this environmental authority must be conducted in accordance with the following:</p> <p>a) <INSERT extent, nature or limitations of the activity approved and if relevant the maximum limit> b) <REPEAT for all relevant activities approved>.</p>
	<p><u>Intent</u></p> <p>This condition sets limits for the activity and will ensure that the level of risk posed by the activity, according to the submitted application, is not exceeded. Similarly, site plans denoting operational areas may be referred to within this condition should the activity need to be conducted within a specific area on site in order to minimise the risk of environmental harm to a specific environmental value, such as a watercourse.</p>
	<p><u>How to comply</u></p> <p>You must conduct the activity within the stipulated limits that the condition sets out, even if the threshold for the activity by definition is broader than this condition. Should you wish to have flexibility in particular aspects of the activity, for instance the ability to move operational areas around the site or increase capacity over time, you need to outline this within your application so that the environmental risks of the activity can be properly assessed at the time of application.</p> <p>If at any time it is unlikely that you can continue conducting the activity within the limits stipulated within this condition you must apply to amend your environmental authority to remove or change this condition.</p>
G2	<p>Any contravention of a condition of this environmental authority must be reported to the administering authority as soon as practicable, and no more than 24 hours after becoming aware of the contravention.</p>
	<p><u>Intent</u></p> <p>This condition will ensure that all instances of non-compliances are promptly made known to the administering authority, even those considered to be minor in nature. This notification will help capture non-compliances that may result in nuisance, or ongoing minor non-compliances which may pose longer term risks to the environment. This will allow action to be taken as necessary by you and the administering authority to protect the environment.</p>

	<p><u>How to comply</u></p> <p>You must report any contravention of a condition of your approval to the administering authority as soon as practicably possible within 24 hours of becoming aware of the contravention. In most instances, this can be done by contacting the Pollution Hotline on 1300 130 372. When reporting through the Pollution Hotline you will be asked to provide details of the contravention and this information will be forwarded to the department’s relevant regional office. By reporting you will have complied with your condition requirements, even if the regional office is made aware of the issue after 24 hours. When reporting through the Pollution Hotline you should also consider if the contravention is an emergency pollution incident that requires the department’s attendance. In making this decision you may wish to consider your duty of care requirements.</p> <p>Depending on the contravention, the administering authority may require further detail in a follow up email, which can be sent to the Pollution Hotline email address, <PollutionHotline@des.qld.gov.au>. You are required to keep records, including full details of the release or event, any potential environmental risks resulting from the release and any actions taken to rectify the event.</p> <p>To demonstrate that you have met your general environmental duty in relation to this condition, you may want to consider the following options:</p> <ul style="list-style-type: none"> • Report possible contraventions to the administering authority as soon as you are made aware of them, even if you are unsure if a condition of the environmental authority has been contravened. • Have alarms systems or identification procedures in place to ensure that any contraventions of conditions are identified swiftly. • Ensure communication systems or procedures are in place to allow staff members to communicate contraventions to site managers quickly.
G3	<p>A report under condition G2 that relates to a release to waters must be submitted via WaTERS, unless otherwise agreed by the administering authority.</p> <p><u>Intent</u></p> <p>This condition will ensure that contraventions that have a potential impact to waters will be reported via the departmental WaTERS portal. Delivery of data in this manner will align with the reporting requirements for water quality monitoring (see condition WT3) and ensure that data is delivered in the appropriate format for rapid response and comparative analysis, if required.</p> <p><u>How to comply</u></p> <p>You are required to submit reports relating to a potential impact to waters via the departmental WaTERS portal.</p> <p>Further information on submitting water release monitoring and tracking data via the WaTERS portal is available in the following location: https://science.des.qld.gov.au/government/science-division/waters.</p>
G4	<p>Records of any contravention of this environmental authority must be made including full details of the contravention and any subsequent actions taken.</p> <p><u>Intent</u></p> <p>The record keeping requirement will ensure that any contraventions of the conditions of the environmental authority are documented.</p>

	<p><u>How to comply</u></p> <p>You are required to keep records, including full details of any release or event, any potential environmental risks or environmental harm resulting from the event and any actions taken to rectify the event.</p>
G5	<p>All records required by the conditions of this environmental authority must be kept for a minimum of five years and all environmental monitoring results and underlying raw data, must be kept until surrender of this environmental authority.</p>
	<p><u>Intent</u></p> <p>This condition will ensure that all documentation held in relation to the environmental authority is available if required by the administering authority. This may be necessary to identify or resolve any environmental issues which may arise as a result of the ongoing operation of the activity.</p>
	<p><u>How to comply</u></p> <p>You must keep all records required by the conditions of your environmental authority for at least five years. This includes details of releases and any other necessary information you require to comply with and to demonstrate compliance with the conditions of the environmental authority. Monitoring results and underlying raw data must be kept for the life of the activity.</p>
G6	<p>All records required by the conditions of this environmental authority must be provided to the administering authority upon request by the time and in the format requested.</p>
	<p><u>Intent</u></p> <p>This condition will ensure that all documentation held in relation to the environmental authority is available if required by the administering authority. This may be necessary to identify or resolve any environmental issues which may arise as a result of the ongoing operation of the activity.</p>
	<p><u>How to comply</u></p> <p>All information and records required by the conditions of your environmental authority must be kept for at least five years. This includes details of releases and any other necessary information you keep to comply with and to demonstrate compliance with the conditions of your environmental authority. Monitoring results and underlying raw data must be kept for the life of the activity.</p> <p>The administering authority can require this information to be provided upon request at the time and in the format requested. Where information is requested in a required format, the administering authority will give consideration to the reasonableness of the request and the purpose of the reporting.</p>
G7	<p>All reasonable and practicable measures must be taken to prevent or minimise any environmental harm caused by the activity.</p>
	<p><u>Intent</u></p> <p>This condition is intended to ensure that all of the activities and all operational and management actions are undertaken in a way which does not cause or threaten to cause environmental harm.</p>

	<p><u>How to comply</u></p> <p>You must ensure that all actions taken, and equipment used to undertake the activity are conducted in a way that minimises risk to the environment. For example, if you are storing chemicals onsite, you must store them in a way that minimises the risk of these chemicals being released to the surrounding environment. This may include storing the chemicals away from busy trafficable areas where they are more likely to be punctured or knocked over, keeping the chemicals in an appropriately bunded area and complying with any best practice or Australian standards relevant to chemical storage. If you had a release of chemicals which resulted in environmental nuisance or harm and you had not taken all reasonable and practicable measures to reduce the potential for the release, you will be in non-compliance with this condition.</p>
G8	<p>Written procedures must be developed and documented within three months of the environmental authority taking effect that:</p> <ol style="list-style-type: none"> a) identify all potential risks to the environment from the activity, including during and outside routine operations, during closure and in an emergency; and b) identify measures to prevent or minimise the potential for environmental harm for each of the potential risks identified; and c) establish an inspection and maintenance program for plant and equipment including calibration and servicing that is in accordance with manufacturer’s instructions; and d) establish a staff training program on obligations under this environmental authority and the <i>Environmental Protection Act 1994</i> to be conducted as part of staff inductions and at least annually; and e) establish processes to review environmental risks, incidents, performance and complaints. <p><u>Intent</u></p> <p>This condition is considered necessary for all activities to ensure procedures, processes or systems are established which detail how you will manage the environmental risk associated with carrying out the activity on the site.</p> <p><u>How to comply</u></p> <p>It’s recommended that an environmental risk assessment be conducted of the activity and site prior to commencement. This assessment should identify the environmental risks that need to be managed and control measures to be employed. An example would be identifying that there is a potential risk for soil erosion into the surrounding waterways in heavy rainfall events. An acceptable control measure would be to develop a storm water management plan, which may include constructing a drainage pond, installing sediment barriers along the boundary of the site and regularly monitoring any receiving waterways.</p> <p>You must have operational procedures that detail how and when to calibrate equipment, and to ensure they are regularly serviced and maintained. This includes all equipment from onsite vehicles to monitoring equipment. Written operational procedures should form the basis for staff training during activities such as induction programs, on the job mentoring and ‘toolbox talks’.</p> <p>For further guidance on conducting a risk assessment refer to SA/SNZ Handbook 89-2013 Risk management – Guidelines on risk assessment techniques.</p>
G9	<p>Written procedures required by condition G8 must be:</p> <ol style="list-style-type: none"> a) implemented; and b) reviewed at least annually; and

	<p>c) provided to the administering authority upon request at the time and in the format requested.</p> <p><u>Intent</u> This condition is considered necessary for all activities to ensure procedures, processes or systems that detail how you will manage environmental risks associated with carrying out the activity are implemented, reviewed and provided to the administering authority upon request.</p> <p><u>How to comply</u> Requiring written procedures to be implemented ensures that staff are aware of relevant procedures that are in place to reduce the risk of environmental harm from the activity. Requiring environmental management procedures to be reviewed at least annually supports the continual improvement of the business management system. However, the review of all (or some) of the procedures may be undertaken at shorter frequencies depending on the risk of the activity. For example, if the activity has the potential to cause dust and the site is in close proximity to a sensitive receptor such as a residential area, the procedures associated with dust management could be reviewed every three months to ensure they are adequate. This review could include conducting an audit of compliance against the environmental authority. The administering authority can require this information to be provided upon request and in the timeframe requested. If electronic data is requested, then data will need to be provided in the required electronic format.</p>
G10	<p>Plant and equipment necessary to comply with the conditions of this environmental authority must be installed, operated and maintained:</p> <p>a) in a proper and effective manner; and b) in accordance with any written procedures developed under condition G8 for the plant and equipment.</p> <p><u>Intent</u> This condition ensures that all plant and equipment necessary to ensure compliance with the conditions of the environmental authority are installed, operated and maintained appropriately. This is also expected to ensure best practice environmental management of the activity as identified in the <i>Environmental Protection Act 1994</i>.</p> <p><u>How to comply</u> You must ensure that plant and equipment is maintained and operated in a way that complies with the conditions of the environmental authority. Plant must be maintained and repaired according to the manufacturer’s specifications or, in the absence of such specifications, in accordance with a competent person’s recommendations or business management system procedures. This condition also requires that staff operating plant and equipment are competent in using such plant and equipment.</p>
G11	<p>Chemicals and fuels in containers of greater than 15 litres must be stored within a secondary containment system.</p> <p><u>Intent</u> The inclusion of this condition is to ensure that chemicals and fuels are contained in an adequate manner which prevents the risk of environmental harm.</p>

	<p><u>How to comply</u></p> <p>Containment systems should be bunded, impervious, large enough to contain a potential spill and roofed wherever possible to prevent ingress of rain that may fill up containment bunds. Australian Standard (AS) 1940:2017 (The storage and handling of flammable and combustible liquids), or later versions, sets out the requirements for safe storage and handling of fuel and chemicals and should be considered when designing and building fuel and chemical storage areas on site.</p>
G12	<p>All analyses required under this environmental authority must be carried out by a laboratory that has National Association of Testing Authorities (NATA) certification, or an equivalent certification, for such analyses. The only exception to this condition is for <i>in situ</i> monitoring of <INSERT relevant indicator>.</p>
	<p><u>Intent</u></p> <p>This condition will ensure that samples analysed within any monitoring program will be reliable.</p>
	<p><u>How to comply</u></p> <p>All testing must be taken to a NATA certified laboratory or equivalent. There are a few exceptions to this requirement for monitoring which can be conducted <i>in-situ</i>. This may include monitoring for pH, dissolved oxygen and turbidity. Where these exceptions apply to your particular monitoring program the condition will expressly state this.</p> <p>For a laboratory to be considered to have an equivalent certification to NATA, it could be accredited for adopting the Organisation for Economic Corporation and Development (OECD) Good Laboratory Practices. Other equivalent certifications may be considered by the administering authority and should be agreed upon before the monitoring is undertaken.</p> <p>Discharge limits, monitoring requirements, monitoring feasibility and the potential environmental risk of the activity may be relevant to the imposition of this condition. There may be social and economic factors that would determine the appropriateness of imposing this condition and it may be altered in some circumstances. For instance, where an environmental authority holder is located in a remote location and feasibility of the monitoring restricts the range of analysis.</p>
G13	<p>All monitoring required by this environmental authority must be recorded.</p>
	<p><u>Intent</u></p> <p>The condition will ensure that a record is made of all monitoring required to be carried out by this environmental authority.</p>
	<p><u>How to comply</u></p> <p>Compliance with this condition will require you to ensure that a record is made of all monitoring required to be carried out by this environmental authority. It is important to note that monitoring includes sampling and analysis, and also extends to the handling, transportation and verification of samples. Recording of this monitoring information does not need to be completed by the person undertaking the monitoring or the analysis.</p>
G14	<p>All monitoring required by this environmental authority must be carried out and interpreted by an appropriately qualified persons(s).</p>

	<p><u>Intent</u></p> <p>The requirement that an appropriately qualified person undertake the monitoring and interprets the results is intended to ensure that the monitoring is conducted properly and that the results, and interpretation of the results, are reliable. Relevant guidelines, Australian standards, or other documents relating to the monitoring will be listed as associated monitoring requirements and must also be adhered to.</p>
	<p><u>How to comply</u></p> <p>Compliance with this condition will require you to ensure that an appropriately qualified person(s) undertakes monitoring at all of the listed release points and for all of the set parameters. You should check the qualifications and experience of the person and satisfy yourself that they are qualified to carry out the monitoring. This could include industry accredited courses, recognised competency or training records. Any monitoring should be carried out in accordance with any relevant best practice guideline or other relevant standards as per the associated monitoring requirements listed in the relevant monitoring conditions. The information gathered as part of the monitoring must be interpreted by people with the relevant qualifications. The monitoring and interpretation need not all be undertaken by the same person, provided they are appropriately qualified.</p>
G15	<p>Details of all environmental complaints received must be recorded including:</p> <ul style="list-style-type: none"> a) date and time the complaint was received; and b) name and contact details of the complainant when provided by the complainant; and c) nature and details of the complaint; and d) investigations undertaken; and e) conclusions formed; and f) actions taken. <p><u>Intent</u></p> <p>To ensure that a minimum level of record keeping is kept by the operator in relation to complaints received. This will help the operator to identify whether there is an operational issue causing environmental harm that needs to be addressed and will allow the administering authority to access these records to better identify potential problems at the site.</p> <p><u>How to comply</u></p> <p>You must keep minimum records of any complaints received including the details as required within this condition.</p>
G16	<p>When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority to investigate any alleged environmental harm caused by the activity.</p> <p><u>Intent</u></p> <p>To ensure that contaminants released to the receiving environment, as a result of the activity, do not cause environmental harm. In determining if further investigation and monitoring is required the administering authority may also consider any past history of incidents and complaints at the site. This condition will ensure that the operator is responsible for investigating and managing environmental harm that results from the operation of the activity.</p>

	<p><u>How to comply</u></p> <p>Upon request from the administering authority, you must investigate all potential sources of environmental harm which may be caused by the activity. You may be required to investigate the potential impacts of the activity on the qualities of the receiving environment that are conducive to protecting:</p> <ul style="list-style-type: none"> • health and biodiversity of ecosystems • human health and wellbeing • the aesthetics of the environment (including the appearance of buildings, structures and other property) • agricultural use of the environment. <p>Compliance with this condition may require you to ensure that an appropriately qualified person undertakes the investigation and associated monitoring if this is required within the request. You should check the qualifications and experience of the person and satisfy yourself that this person is qualified to carry out the monitoring. Any monitoring should be carried out in accordance with any relevant best practice guideline or other relevant standards.</p>
G17	<p>Any report, results and underlying raw data, of monitoring required by condition G16 must be recorded.</p> <p><u>Intent</u></p> <p>This condition will ensure that all documentation held in relation to monitoring carried out at the request of the administering authority is available if required. This may be necessary to identify or resolve any environmental issues which may arise as a result of the operation of the activity.</p> <p><u>How to comply</u></p> <p>You must keep all information and records required by the conditions of your environmental authority for at least five years. This includes monitoring reports, details of releases and any other necessary information you require to comply with and to demonstrate compliance with the conditions. Monitoring results and underlying raw data must be kept for the life of the activity.</p> <p>The administering authority can require this information to be provided upon request. Where information is requested in a required format, the administering authority would give consideration to the reasonableness of the request and purpose of the reporting.</p>
G18	<p>Prior to the commencement of the activity, a receiving environment monitoring program¹ for the activity must be implemented.</p> <p>¹ Note: The receiving environment monitoring program is subject to review and amendment as required by changing regulation, monitoring results or administering authority recommendations.</p> <p><u>Intent</u></p> <p>This condition may be necessary and desirable for activities that have a potential to result in impacts on a receiving environment (including where release limits are based on modelling). Long term or highly contaminated releases to waters, air or land will likely require this condition to be imposed.</p> <p>Not all activities will require this condition. It may be unnecessary for lower risk sites to develop a program and implement this (sometimes extensive and expensive) monitoring as the release limits and release monitoring conditions are likely to be sufficient in managing the potential environmental risk.</p> <p>If this condition is included, conditions G19 to G23 would also be applied to the EA.</p>

	<p><u>How to comply</u></p> <p>It is essential that any monitoring program be designed and implemented by an appropriately qualified person(s). The monitoring program must monitor for all of the contaminants from the activity which have the potential to cause environmental harm to the receiving environment. The monitoring frequency must be sufficient to determine if the activity is having an impact on the receiving environment. Background levels of the relevant contaminants must be understood prior to conducting the activity.</p>
G19	<p>The receiving environment monitoring program (REMP) must include at least the following:</p> <ol style="list-style-type: none"> 5. Clearly stated aims and objectives of the receiving environment monitoring program. 6. Description of operation of the activity including: <ol style="list-style-type: none"> a. Operational procedures detailing operational rules, accountabilities, recording and reporting requirements and actions to be taken in the event of non-conformance with the procedure for the following aspects of the activity: <ol style="list-style-type: none"> i. Water management (pond water and discharges); ii. Organic waste (sludge) management (handling, storage and monitoring); iii. Land management (vegetation, sediment and erosion, acid sulfate soils, wildlife, weed and feral animals, fire and cultural heritage); iv. Hazardous substances and chemicals management; v. Waste management; vi. Air emissions (odour and noise); and vii. Complaints management. b. Duration and timing of the growing and harvest cycles (if applicable); c. Timing and procedure for inspecting any waste disposal area (if applicable) and drainage systems. 7. A monitoring program¹ to monitor the effects of the activity on the receiving environment regularly and while wastewater is being discharged from the site, that includes: <ol style="list-style-type: none"> a. Suitable test sites within the receiving waters² that are potentially impacted by the release; b. Control sites where relevant background or reference conditions can be established; and c. Monthly sampling not including periods during or immediately after rainfall. 8. A program for annual assessment and reporting that complies with the requirements of conditions G26 and G27. <p>¹The monitoring program should be developed using the latest version of the administering authority's Receiving Environment Monitoring Program Guideline (ESR/2016/2399).</p> <p>²For the purposes of the REMP, the receiving waters are the waters of <i><INSERT Receiving waters></i>. The REMP should encompass any sensitive receiving waters or environmental values that will potentially be affected by an authorised release from the facility.</p> <p><i><INSERT AND ADD RELEVANT NUMBERING the following if applicable to the receiving environment and the nature of the release></i></p> <ul style="list-style-type: none"> • A program to assess seagrass in accordance with the "Guidance on Seagrass Monitoring" set out in the administering authority's Monitoring and Sampling Manual; • A program to assess any change to coastal processes (including erosion) due to wastewater releases and impacts to tidal prism. • A detailed description of the assessment methodology to provide data in relation to trigger values that will define alert levels. • Clearly set out data handling and evaluation procedures that demonstrate how exceedances of alert levels will be determined. • Management actions to be initiated if alert levels are exceeded.

	<p><INSERT AND ADD RELEVANT NUMBERING additional site-specific requirements as necessary></p>
	<p><u>Intent</u></p> <p>This condition will ensure that the receiving environment monitoring program satisfies certain minimum requirements to ensure that the values of the receiving environment will be appropriately monitored. The requirements may vary from site to site.</p>
	<p><u>How to comply</u></p> <p>To comply with this condition the appropriately qualified person(s) preparing the receiving environment monitoring program must include all of the information specified under this condition, as a minimum requirement.</p>
G20	<p>The receiving environment monitoring program must be submitted to the administering authority at least 20 business days prior to the commencement of the activity and amended in accordance with any comments made by the administering authority.</p>
	<p><u>Intent</u></p> <p>In order to ensure the suitability of the proposed receiving environment monitoring program the administering authority requires at least 20 business days to conduct a technical review and provide details of any amendments deemed necessary.</p>
	<p><u>How to comply</u></p> <p>To comply with this condition, you should ensure that the proposed receiving environment monitoring program is provided to the administering authority with sufficient time for review and amendment, at a minimum, 20 business days is required. Comments on the receiving environment monitoring program provided by the administering authority must be incorporated into the program.</p> <p>To ensure there is no delay to the commencement of the activity while any issues are being resolved, it is strongly recommended that the receiving environment monitoring program is submitted at the earliest possible date.</p>
G21	<p>If the receiving environment monitoring program is amended at any time, the amended program must be submitted to the administering authority at least 20 business days prior to commencing activities under the amended receiving environment monitoring program.</p>
	<p><u>Intent</u></p> <p>In order to ensure the suitability of the proposed amendments to the receiving environment monitoring program the administering authority requires at least 20 business days to conduct a technical review and provide details of any amendments deemed necessary.</p>
	<p><u>How to comply</u></p> <p>To comply with this condition, you should ensure that the proposed receiving environment monitoring program is provided to the administering authority with sufficient time for review and amendment, at a minimum, 20 business days is required.</p> <p>Please note: The activity can continue to be carried out in accordance with the previous approved version of the receiving environment monitoring program until the amended version is supported.</p>

G22	<p>Any comments made by the administering authority on the amended receiving environment monitoring program provided in accordance with condition G21 must be addressed to the satisfaction of the administering authority prior to implementing the amended receiving environment monitoring program.</p> <p><u>Intent</u> This condition is intended to ensure the suitability of the amendments to the receiving environment monitoring program.</p> <p><u>How to comply</u> To comply with this condition, you should ensure that any comments on proposed amendments to the receiving environment monitoring program provided by the administering authority are incorporated into the program to the satisfaction of the administering authority. You should retain evidence of support for the updated receiving environment monitoring program (typically in the form of an email) to demonstrate compliance with this condition.</p>
G23	<p>Condition G21 and G22 apply each time the receiving environment monitoring program is amended.</p> <p><u>Intent</u> This condition will ensure that any amendments to the receiving environment monitoring program are acceptable to the administering authority.</p> <p><u>How to comply</u> To comply with this condition, you should ensure that the proposed receiving environment monitoring program is provided to the administering authority in accordance with G21 and updated in accordance with G22 each time it is amended.</p>
G24	<p>The activity must not be carried out unless the required financial assurance is held by the administering authority for the activity.</p> <p><u>Intent</u> This condition will ensure that financial assurance is paid as security for compliance with the environmental authority and for costs or expenses which the administering authority might incur for rehabilitation or minimising environmental harm if necessary.</p> <p>Not all activities will require financial assurance to be provided. In accordance with s308(3) of the EP Act, the activities which may require financial assurance are those which pose a certain level of risk to the environment. This might include activities that have a high potential for environmental contamination to occur or sites with a large disturbance footprint. The administering authority will decide if financial assurance is required on a case-by-case basis.</p> <p>Where the condition applies, if the environmental authority is transferred, the new holder must also comply with this requirement.</p>

	<p><u>How to comply</u></p> <p>You must not carry out, or allow the carrying out, of activities permitted under the environmental authority until financial assurance has been paid to the administering authority. You will need to initiate a request with the department for a decision about the amount and form of financial assurance. Once the amount and form is decided and you have paid it you may begin your activity.</p> <p>For more information on calculating financial assurance refer to the latest version of the guideline Financial assurance under the <i>Environmental Protection Act 1994</i> (ESR/2015/1758), which can be located on the administering authority's website at www.des.qld.gov.au (search for ESR/2015/1758).</p>
G25	<p>If the administering authority increases the amount of financial assurance, the additional financial assurance must be given to the administering authority within 28 days of receiving written notice of the increase.</p> <p><u>Intent</u></p> <p>This condition will ensure that if the administering authority requires future changes to the financial assurance amount, it is paid within 28 days.</p> <p><u>How to comply</u></p> <p>If the administering authority sends you a notice requiring additional financial assurance you are required to pay this amount within 28 days of receiving written notice.</p> <p>When financial assurance has been given for an EA, under section 315(1) of the EP Act the administering authority may, at any time, require the holder of the environmental authority to change the amount of financial assurance. The following is a list of examples where the department may review the amount of financial assurance and decide to require a change to the amount of financial assurance held. It may be in response to:</p> <ul style="list-style-type: none"> • an amended environmental authority resulting in a change in disturbance • changes in activities which would result in an increase to the maximum significant disturbance since financial assurance was last given to the administering authority • the amount of financial assurance held by the administering authority has been discounted and either the nominated period of financial assurance has ended, or an event or change in circumstance has resulted in the holder of the environmental authority no longer being able to meet one or more of the mandatory pre-requisites or applicable discount criteria • a <i>progressive rehabilitation</i> report associated with an application for progressive certification • a report from a compliance inspection, annual return, environmental audit or similar • because of environmental harm caused or the potential for environmental harm • information that has identified materially false or misleading declarations were made.
G26	<p>An annual monitoring report must be prepared and submitted to the administering authority by 30 November each year, for the preceding financial year.</p> <p><u>Intent</u></p> <p>To ensure the preparation of regular reports that summarise the annual performance of the activities, including actions taken to minimise impacts or to correct any issues identified during the past financial year.</p>

	<p><u>How to comply</u></p> <p>You must ensure that the annual report is prepared and submitted to the administering authority by the date specified.</p> <p>You can request to change this condition where a particular reporting date is preferable, other than the end of November for the previous financial year. However, it is desirable for the industry to maintain a coordinated reporting date which will assist both the administering authority and industry bodies in resourcing this work each year.</p>
G27	<p>The annual monitoring report required by condition G26 must include:</p> <ul style="list-style-type: none"> f) Findings as a result of the receiving environment monitoring program for the period; and g) Calculation of annual mass load of both nitrogen and phosphorus in accordance with condition WT5; and h) A summary of the previous 12 months monitoring results including graphical representations identifying relevant indicator limits, if this data has not already been reported to the WaTERS database; and i) An outline of actions taken or proposed to minimise any environmental risk identified from, for example, monitoring and environmental complaints; and j) Calculations of the volume and frequency of wet weather storage overflows, where applicable. <p><INSERT the following, and update numbering, if a net mass load is sought ></p> <ul style="list-style-type: none"> c) Calculation of annual net mass load of both total nitrogen and total phosphorus in accordance with condition WT5. <p><INSERT the following, and update numbering, if an offset is sought ></p> <ul style="list-style-type: none"> c) Calculation of annual mass load (offset) of both total nitrogen and total phosphorus in accordance with condition WT5. <p><INSERT other site-specific details the annual monitoring report needs to contain, and update numbering></p> <p><u>Intent</u></p> <p>This condition will ensure that the annual monitoring report satisfies certain minimum requirements to ensure that the values of the receiving environment will be appropriately monitored. The requirements may vary from site to site.</p> <p><u>How to comply</u></p> <p>To comply with this condition the annual monitoring report must include all of the information specified under this condition (prepared by a suitably qualified person as required), as a minimum requirement.</p>
G28	<p>Unless otherwise specified in a condition of this environmental authority, all records required to be submitted to the administering authority under this environmental authority, must be submitted to:</p> <p>1300 130 372 (option 2) / pollutionhotline@des.qld.gov.au (for notifications under condition G2 that does not relate to a release to waters); or</p> <p>palm@des.qld.gov.au; or</p> <p>Permit and Licence Management Department of Environment and Science</p>

	<p>GPO Box 2454 Brisbane QLD 4001</p>
	<p><u>Intent</u> This condition will ensure that the information required to be submitted to the department is received by the department through the appropriate channels.</p>
	<p><u>How to comply</u> You must ensure that the information required to be submitted to the department is submitted at the appropriate address. For notification of pollution events, this is either through WaTERS (for releases to waters) or the Pollution Hotline on phone 1300 130 372 (option 2) or email pollutionhotline@des.qld.gov.au, Submissions of other documents such as the Receiving Environment Monitoring Program or the annual monitoring report can be made to Permit and Licence Management by the email or postal address specified in the condition. Reference should be made in the attached correspondence to the environmental authority number and condition number that is being satisfied by the submission.</p>

Air	
A1	<p data-bbox="256 421 1465 483">Odours or airborne contaminants from the activity must not cause environmental nuisance to any sensitive place or commercial place.</p> <p data-bbox="256 533 331 560"><u>Intent</u></p> <p data-bbox="256 577 1465 667">The intent of this condition is to ensure that contaminants released to air as a result of the activity do not cause environmental nuisance. You must not cause unreasonable interference with the qualities of the air environment that are conducive to protecting:</p> <ul data-bbox="308 689 1465 810" style="list-style-type: none"> • health and biodiversity of ecosystems • human health and wellbeing • the aesthetics of the environment (including the appearance of buildings, structures and other property). <p data-bbox="256 833 1465 1012">Nuisance may include an unreasonable interference such as creating an unhealthy, noxious, offensive or unsightly condition because of your release. While nuisance is subjective and cannot always be defined by putting a limit on a set contaminant release, you may consider the air quality objectives within Schedule 1 of the Environmental Protection (Air) Policy 2019 to help determine if your release is likely to cause a nuisance. Not all contaminants likely to cause nuisance are listed within the Environmental Protection (Air) Policy 2019.</p> <p data-bbox="256 1034 1465 1124">Contaminants may include odour, aerosols, fumes, particles, smoke, steam or dust. They may be visible or not. The most common environmental nuisance complaints resulting from releases to air are in relation to odour and dust.</p>

	<p><u>How to comply</u></p> <p>You must ensure that odour and other air contaminants are contained and controlled at the site not result in nuisance at a sensitive or commercial place (as applicable).</p> <p>When considering if this condition has been complied with the administering authority will consider any existing and approved land uses. The single state planning policy references a need to consider protecting existing and approved land uses from encroachment. Likewise, where the operation of the activity is approved, there is a need to recognise that future encroachment of more sensitive land uses (while approved) may reduce the operator’s ability to comply with this condition, through no change in their activity.</p> <p>This condition will also set out (through the definitions of sensitive and commercial places) where nuisance must not occur. Depending on the application, the definitions for sensitive place and commercial place may be altered to ensure that the appropriate definitions apply based on the location and surrounding uses of the particular site.</p> <p>You will need to identify and manage the potential sources of air emissions from your site, particularly those that would result in odour nuisance. The following list identifies some of the ways that emissions can be managed. It is not exhaustive, and you are responsible for working out which measures are necessary to adequately manage the risk from your activity.</p> <ul style="list-style-type: none"> • Minimise the frequency and duration of odour generating activities. • Implement measures to reduce impacts of odour being generated (i.e. appropriate storage and regular disposal of odorous wastes and reducing the area or source of the odour). • Implement and maintain odour collection and treatment systems • Establish a routine odour/dust monitoring program to proactively check that emission control devices and management practices are working. • Install back-up systems and devices to indicate any failures of the pollution control equipment. • Enclose equipment or activities which produce dust or emissions. • Design, create and maintain wind breaks.
Land	
L1	<p>Contaminants from the activity must not be released to land.</p> <p><u>Intent</u></p> <p>This condition is necessary and desirable to ensure that contaminants are not released to land, other than as specifically permitted through the conditions of the EA. Any permitted releases to land will have been assessed by the administering authority and listed in condition L2 to ensure that environmental values of land are protected.</p>

	<p><u>How to comply</u></p> <p>Land includes characteristics of the landscape, such as the topography or vegetation and ecosystems that it supports, as well as the chemical and physical properties of soils. Impacts are typically associated with the release (intentional or otherwise) of contaminants from the activity to land, or land disturbance caused by the activity.</p> <p>You must not release contaminants to land, either directly or indirectly. This will require you to take measures to minimise the potential for spills and unauthorised releases to occur both onsite and offsite. You also must not irrigate wastewater to land or allow any release involving contaminants, including contaminated stormwaters to land.</p> <p>The following list identifies some of the ways that releases of contaminants to land can be prevented or managed. It is not exhaustive, and you are responsible for working out which measures are necessary to adequately manage the risk from your activity.</p> <ul style="list-style-type: none"> • Providing bunding for containers containing liquid contaminants. • Providing roofing for any contaminants stored on the site. • Containing contaminated stormwater onsite. • Removing contaminants from contained stormwater prior to release offsite. • Hard surfacing areas of the site used for storing contaminants. • Leak detection systems, high level alarm systems and regular maintenance of infrastructure. • Emergency procedures and contingency plans for accidental contaminant releases. • Maintaining adequate freeboard for contaminated water storages.
L2	<p>Treatment and management of acid sulfate soils must comply with the latest edition of the Queensland Acid Sulfate Soil Technical Manual.</p> <p><u>Intent</u></p> <p>Acid sulfate soils are managed in accordance with current best practice methods to minimise the potential for environmental harm or nuisance to occur.</p> <p>This is a location specific condition and may be applied if the activity has the potential to disturb acid sulfate soils based on the type of activity and the location of the activity. This condition is intended to be used for activities which may involve acid sulfate soil disturbance, but the level of disturbance poses a relatively low risk to the environment. For high-risk activities involving large volumes of disturbance or strategic reburial of acid sulfate soils a more detailed assessment will be required and site-specific conditions will apply. Activities that do not involve the disturbance of acid sulfate soils will not require this condition.</p> <p>While this condition does require certain treatment to be adopted, it is not meant to restrict innovative approaches to acid sulfate soil management.</p> <p><u>How to comply</u></p> <p>The Queensland Acid Sulfate Soil Technical Manual sets out clear requirements which must be complied with if this condition is applied. The Queensland Acid Sulfate Soil Technical Manual also provides guidance on various aspects of managing acid sulfate soils which can be implemented to help reduce the potential for environmental harm or environmental nuisance to occur. Importantly, you must meet the verification requirements following the treatment of acid sulfate soils in order to comply with this condition.</p>

L3	<p>Rehabilitation of the site is required to achieve a safe, stable and non-polluting landform.</p> <p><u>Intent</u></p> <p>This condition aims to ensure that sites requiring rehabilitation will achieve a safe, stable and non-polluting landform upon completion of the activity.</p> <p>This condition is unlikely to be imposed for activities that involve minimal disturbance or risk of contamination of the site.</p> <p>In some instances, sites which require very specific rehabilitation requirements (usually in relation to the final land use, design and vegetation) will have site specific conditions developed by the assessing officer in relation to rehabilitation.</p> <p>Note also that for contaminated land, the contaminated land provisions (Chapter 7, Part 8) of the <i>Environmental Protection Act 1994</i> may apply.</p> <p><u>How to comply</u></p> <p>Where this rehabilitation condition applies to your EA, you must ensure that rehabilitation is undertaken to achieve the listed outcomes. It is important that the rehabilitation is done correctly to ensure that it will achieve a safe, stable and non-polluting landform and meet any final land use requirements.</p> <p>While rehabilitation will often take time to achieve a finished state, where rehabilitation efforts are clearly unable to achieve a safe, stable or non-polluting landform you will be in breach of this condition.</p> <p>In demonstrating that you have met your general environmental duty and achieving the outcomes in relation to this condition you may consider the following options in relation to this condition.</p> <ul style="list-style-type: none"> • Remove all waste material from the site. • Have a rehabilitation plan developed by a suitably qualified person and implement this plan through to completion. • The plan should include final and milestone success criteria for successful rehabilitation and must also include contingency measures for not meeting success criteria, unforeseen storm events and other scenarios such as fire, vandalism etc. • Remediate any contaminated land (i.e. contaminated soils or decommissioned dams containing salt or other contaminants). • Reshape and re-profile significantly disturbed land to a stable landform • Prevent access to disturbed areas undergoing rehabilitation. • Re-establish surface drainage lines. Reinststate the top layer of the soil profile. • Establish groundcover to ensure that erosion is minimised. • Establish native vegetation of floristic species composition found in nearby sites. • Undertake weed management. • Undertake rehabilitation in a manner such that any actual and potential acid sulfate soils in or on the site are either not disturbed, or submerged, or are treated to prevent and/or minimise environmental harm. Install and maintain appropriate sediment and erosion controls until such time as the site is sufficiently stable and sediment loss is minimised. • Progressively monitor the rehabilitation and undertake maintenance to ensure that the site will achieve a safe, stable and non-polluting landform with the original contours of the land.
Acoustic	
N1	<p>Noise from the activity must not cause environmental nuisance to any sensitive place or commercial place.</p>

	<p><u>Intent</u></p> <p>This condition will ensure that noise caused by or resulting from the activity does not cause nuisance to the community or the environment. This condition is necessary and desirable for activities which have a potential to generate noise.</p> <hr/> <p><u>How to comply</u></p> <p>You must ensure that the release of noise resulting from the activities do not cause an environmental nuisance to any sensitive place or commercial place. Environmental nuisance is unreasonable interference (or likely interference) with an environmental value. Environmental value of noise include the qualities of the acoustic environment that are conducive to protecting health and biodiversity of ecosystems, the community and human health and wellbeing including by ensuring a suitable acoustic environment for individuals to sleep, study or learn, be involved in recreation, including relaxation and conversation.</p> <p>The term ‘noise’ is a subjective quality and is often used to refer to unwanted or intrusive sound. Noise becomes a nuisance when there is an unreasonable interference with an acoustic value. Nuisance noise can be continuous or intermittent, but the effect is such that there is a material interference with property or the personal comfort or quality of life of persons. Noise includes vibration of any frequency, whether emitted through air or another medium.</p> <p>Factors that may increase the risk of noise impacts from a development include:</p> <ul style="list-style-type: none"> • development or operations particularly close to a noise sensitive place or commercial place • existing land use with a very low background noise level • conducting noise-generating activities outside standard business hours • particularly intrusive noises being generated by the activity (e.g. tonal or impulsive noises). <p>To comply with this condition, you will need to identify and manage the potential sources of noise emissions from your activity if there is potential for environmental nuisance to occur.</p> <p>The administering authority guideline – Application requirements for activities with impacts to noise (ESR/2015/1838) will help you to accurately identify the environmental values of the site and surrounding areas including any nearby sensitive places and to identify the potential impacts which are likely to arise due to your activity.</p>
<p>Waste</p>	
<p>W1</p>	<p>Other than as permitted by this environmental authority, all waste generated by the activity must be lawfully reused or recycled, and/or lawfully removed to a facility that can lawfully accept the waste.</p> <hr/> <p><u>Intent</u></p> <p>This condition is necessary and desirable for any activity which generates or deals with waste as part of the activity. It will ensure that the removal and disposal of waste is undertaken in a way which is lawful.</p>

	<p><u>How to comply</u></p> <p>‘Waste’ is defined under section 13 the EP Act as including any thing, other than an end of waste resource approved under the <i>Waste Reduction and Recycling Act 2011</i>, that is:</p> <ol style="list-style-type: none"> 1. left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity, or 2. surplus to the industrial, commercial, domestic or other activity generating the waste. <p>Wastes can be in the form of a gas, liquid, solid or energy, or a combination of any of these forms. Wastes can be highly hazardous or relatively benign. Something can be generated as a waste from one process and also be considered to be a resource of value for another process.</p> <p>The management of all wastes (not just regulated wastes) can be viewed as a series of responsibilities, beginning with the waste generator and followed by other subsequent waste handlers including those that reuse or dispose of the waste. Everyone in this waste chain has a responsibility to ensure that the reuse, recycle, transport, storage, treatment and disposal of waste is undertaken appropriately and to ensure that environmental harm is not caused.</p> <p>This condition requires that any type of waste is transported and disposed of or reprocessed in a lawful manner. You should note that regulated wastes have increased requirements under the EP Act in relation to their handling, transport, storage and disposal. Generally, it is good practice to reduce, reuse and recycle prior to disposing waste. However, if you do need to remove waste from your site to reuse, recycle or dispose of it, you must ensure that it is done in a lawful manner. Certain regulated wastes may be recycled or reprocessed as long as they have the necessary approvals. General waste disposal must be taken to a licenced landfill or waste disposal facility.</p> <p>Please note, there may be additional requirements specific to the activity under different jurisdictions (for example, the conditions of a Development Approval under the <i>Planning Act 2016</i>). In particular, the Australian Aquatic Veterinary Emergency Plan (AQUAVETPLAN), which is a series of manuals that outline Australia’s approach to national disease preparedness and propose the technical response and control strategies to be activated in a national aquatic animal disease emergency.</p> <p>Should the management of an aquatic animal disease emergency in accordance with the AQUAVETPLAN require an emission that is not authorised by your Environmental Authority, a Temporary Emissions Licence (TEL) may be appropriate. Further information on TELs is available in the following location: https://environment.des.qld.gov.au/__data/assets/pdf_file/0036/89388/era-gl-temporary-emissions-licence.pdf</p>
W2	<p>The administering authority must be notified as soon as practicable, but no more than 24 hours after becoming aware of any disease outbreak requiring treatment and/or drainage of ponds.</p> <p><u>Intent</u></p> <p>This condition will ensure that instances of disease outbreak are promptly made known to the administering authority. This will allow action to be taken as necessary by you and the administering authority to protect the environment.</p>

	<p><u>How to comply</u></p> <p>You must report any disease outbreak to the administering authority as soon as practicably possible within 24 hours becoming aware of the outbreak. In most instances, this can be done by contacting the Pollution Hotline on 1300 130 372. When reporting through the Pollution Hotline you will be asked to provide details of the outbreak and this information will be forwarded to the department's relevant regional office. By reporting you will have complied with your condition requirements, even if the regional office is made aware of the issue after 24 hours.</p> <p>Depending on the outbreak, the administering authority may require further detail in a follow up email which can be sent to the Pollution Hotline email address, <PollutionHotline@des.qld.gov.au>. You are required to keep records, including full details of the event, any potential environmental risks resulting from the outbreak and any actions taken to rectify the event.</p>
W3	<p>Where diseased organisms and/or affected water require offsite disposal the following records must be kept:</p> <ol style="list-style-type: none"> a) the date, quantity and type of waste disposed of; and b) name of the waste transporter and/or disposal operator that removed the waste; c) details of suspected or confirmed disease; and d) the intended treatment and/or disposal destination of the waste. <p><u>Intent</u></p> <p>To ensure a minimum level of record keeping in relation to the disposal of diseased organisms and/or affected water which may carry significant risk to wild populations.</p> <p>This will help the operator to track the lawful disposal of these by-products and will allow the administering authority to access these records should concerns about disease outbreak arise.</p> <p><u>How to comply</u></p> <p>You must ensure that, if diseased organisms and/or affected water require offsite disposal, records are kept that meet the listed minimum requirements.</p>
W4	<p>Sludge removed from any ponds must be stored and/or disposed of in a manner that does not cause or have the potential to cause a release of contaminants.</p> <p><u>Intent</u></p> <p>This condition will ensure that any sludge removed from ponds will be stored and treated in a manner that does not result in the release of contaminants.</p>

	<p><u>How to comply</u></p> <p>You must store any pond sludge so as not to release contaminants, either directly or indirectly, unless that release is permitted by another condition (for example, as part of a wastewater release). This will require you to take measures to minimise the potential for uncontrolled releases of pond sludge and contaminated stormwater to land and waters (including groundwater through seepage).</p> <p>The following list identifies some of the ways that the risk of releasing of contaminants can be managed. It is not exhaustive, and you are responsible for working out which measures are necessary to adequately manage the risk from your activity.</p> <ul style="list-style-type: none"> • Ensuring adequate freeboard in any storages to contain stormwater generated by a storm event up to and including a 24-hour storm event with an average recurrence interval of 1 in 10 years. • Providing roofing for any contaminants stored on the site to prevent the contamination of stormwater. • Containing contaminated stormwater onsite. • Removing contaminants from contained stormwater prior to release offsite. • Lining storage areas with an impervious material to prevent seepage to groundwater. • Leak detection systems, high level alarm systems and regular maintenance of infrastructure. • Emergency procedures and contingency plans for accidental contaminant releases.
W5	<p>Any diseased, or potentially diseased, organisms and affected water removed from the ponds for disposal onsite must be disposed of in a separate lined and bunded disposal area.</p> <p><u>Intent</u></p> <p>This condition will ensure a minimum level of measures to be employed in the disposal of diseased, or potentially diseased, organisms and affected water, which may carry significant risk to environmental values (e.g. wild populations, odour releases etc.).</p> <p>This will help the operator to track the disposal of these by-products and will allow the administering authority to access these records should concerns about disease outbreak arise.</p> <p><u>How to comply</u></p> <p>You must ensure that a lined and bunded waste disposal area is available for the storage or disposal of any diseased, or potentially diseased organisms and affected water.</p> <p>The lining of the disposal area should be sufficiently impervious to prevent seepage to groundwater of any liquid and the bunding should be designed to ensure adequate freeboard to contain stormwater generated by a storm event up to and including a 24 hour storm event with an average recurrence interval of 1 in 10 years.</p> <p>You should keep records demonstrating compliance with the construction conditions and regularly have the ponds inspected by a suitably qualified person to ensure ongoing compliance.</p>
W6	<p>At the end of each day that diseased, or potentially diseased, organisms and affected water have been placed in the waste disposal area, the organisms and affected water must be covered with at least 200mm of earth.</p>

	<p><u>Intent</u></p> <p>This condition will ensure a minimum level of measures to be employed in the disposal of diseased, or potentially diseased, organisms and affected water, which may carry significant risk to environmental values (e.g. wild populations, odour releases etc.).</p> <p>This condition will prevent potential incidental transmission of disease (for example, birds carrying potentially diseased organisms offsite).</p>
	<p><u>How to comply</u></p> <p>You must ensure that at the end of each day on which organisms are placed in the waste disposal area the organisms must be covered with not less than 200mm of earth. Management procedures should reflect this requirement and records should be kept documenting the actions being carried out.</p>
W7	<p>If organisms and/or affected water are placed in a waste disposal area, the following records must be kept:</p> <ul style="list-style-type: none"> a) date placed; and b) quantity of organism and/or affected water disposed; and c) suspected or confirmed disease; and d) details of any treatment applied to neutralise disease.
	<p><u>Intent</u></p> <p>To ensure a minimum level of record keeping in relation to the organisms and affected water placed in the waste disposal area, which may carry significant risk to wild populations.</p> <p>This will help the operator to track the lawful disposal of these by-products and will allow the administering authority to access these records should concerns about disease outbreak arise.</p>
	<p><u>How to comply</u></p> <p>You must ensure that, if diseased organisms and/or affected water are placed in the waste disposal areas, records are kept that meet the listed minimum requirements.</p>

Water	
WT1	Other than as permitted by this environmental authority, contaminants from the activity must not be released to waters .
	<p><u>Intent</u></p> <p>This condition is necessary and desirable to ensure that contaminants are not released to waters, other than as specifically permitted through the conditions of the EA.</p>
	<p><u>How to comply</u></p> <p>Other than as specifically authorised within your EA, you must not release contaminants to waters. This includes, but is not limited to: surface waters, stormwaters, groundwaters, tidal waters, the bed and banks of waters and the ocean.</p>

WT2

Contaminants must only be released to surface waters where:

1. they are from the discharge locations; and
2. the release limits for each indicator are met at the discharge locations; and
3. monitoring at all monitoring locations and at the frequency;

as per *Table 1 – Contaminant monitoring, discharge location and release limits*; and

4. the associated requirements are complied with.

Table 1 – Contaminant monitoring, discharge location and release limits

Monitoring location	Discharge location	Indicator	Release limit			Minimum monitoring frequency
			Minimum	Mean	Maximum	
		pH				Daily
		Dissolved oxygen				
		Turbidity				
		Electrical conductivity				
		Temperature				
		Total nitrogen (mg/L)				Weekly
		Ammonia (mg/L)				
		Oxidised nitrogen (mg/L)				
		Total phosphorus (mg/L)				
		Filtered reactive phosphorus (mg/L)				
		Total suspended solids (mg/L)				

Associated requirements

1. <INSERT timeframes for which mean is to be calculated. For example, it might be calculated weekly as a rolling mean over 6 weeks (short-term), or in blocks defined by designated dates, such as a 52-week mean (long-term) for a calendar or **financial year**, or defined by the commencement (start date) of the environmental authority>
2. Monitoring must be carried out in accordance with the methods prescribed in the current edition of the Department of Environment and Science Monitoring and Sampling Manual.
3. Water samples must be representative of the general condition of the water body.
4. All determinations must employ analytical practical quantification limits of sufficient sensitivity to enable comparisons to be made against water quality objectives/triggers/limits relevant to the particular water or sediment quality characteristics.
5. Monitoring must be undertaken during a release and at the frequency stated.
6. All monitoring devices must be calibrated and maintained according to the manufacturer's instruction manual.
7. Ammonia, NOx and filterable reactive phosphorus (FRP) must be measured when total nitrogen and total phosphorus are monitored.

	<p><u>Intent</u></p> <p>Where a release of contaminants to surface waters is proposed, limits are set on contaminants to ensure that the environmental values are protected.</p> <hr/> <p><u>How to comply</u></p> <p>You must not exceed the release limits for the relevant contaminants as set out within the conditions of your EA.</p> <p>Monitoring undertaken in line with the condition must demonstrate compliance with the release limits.</p> <p>This table will be developed in consultation with the administering authority's experts on surface waters based on your specific activity and the administering authority's Technical guideline-Licensing Wastewater release to Queensland waters (ESR/2015/1654). You will be advised of the proposed table prior to receiving the EA.</p> <p>Where the proposed release is set to achieve certain dilution and mixing rates within the receiving waters based on the modelling estimates, particulars of the methodology may be set in this table. For example, if the release location is tidal, achieving the minimum required dilution may depend on the outfall pipe being submerged below the lowest astronomical tide at a set depth, or the release occurring by way of using a diffuser.</p>												
WT3	<p>All water quality monitoring data collected under this authority must be provided to the administering authority annually via WaTERS and in the specified electronic format requested.</p> <hr/> <p><u>Intent</u></p> <p>This condition will ensure that contraventions that have a potential impact to waters will be reported via the departmental WaTERS portal. Delivery of data in this manner will ensure that data is delivered in the appropriate format for rapid response and comparative analysis, if required.</p> <hr/> <p><u>How to comply</u></p> <p>You are required to submit reports relating to a potential impact to waters via the departmental WaTERS portal.</p> <p>Further information on submitting water release monitoring and tracking data via the WaTERS portal is available in the following location: https://science.des.qld.gov.au/government/science-division/waters.</p>												
WT4	<p>The annual mass load of total nitrogen and total phosphorus released to waters from <INSERT release point> must comply with the limits listed in <i>Table 2 – Contaminant release to waters – annual mass load limits</i>.</p> <p>Table 2 – Contaminant release to waters – annual mass load limit</p> <table border="1" data-bbox="261 1720 1465 1890"> <thead> <tr> <th>Release point</th> <th>Indicator</th> <th>Limit type</th> <th>Release limit</th> </tr> </thead> <tbody> <tr> <td></td> <td>Total nitrogen</td> <td>Maximum</td> <td>kg</td> </tr> <tr> <td></td> <td>Total phosphorus</td> <td>Maximum</td> <td>kg</td> </tr> </tbody> </table>	Release point	Indicator	Limit type	Release limit		Total nitrogen	Maximum	kg		Total phosphorus	Maximum	kg
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	Total nitrogen	Maximum	kg										
	Total phosphorus	Maximum	kg										

	<p><u>Intent</u></p> <p>Where a release of nutrients to surface waters is proposed, limits are set on the annual mass load of total nitrogen and total phosphorus to ensure that the total nutrient load within the receiving waters remains below the threshold at which adverse impacts to environmental values are expected.</p> <p><u>How to comply</u></p> <p>You must ensure that the activity is managed in such a way that the annual mass load of total nitrogen and total phosphorus released to waters complies with the limits outlined in Table 2.</p> <p>As per the definitions provided in Schedule 7.1, annual mass load is calculated as follows:</p> <p style="padding-left: 40px;">Annual mass load total nitrogen (kg) = yearly sum of daily release volume (ML) x yearly long term mean total nitrogen concentration (mg/L)</p> <p style="padding-left: 40px;">Annual mass load total phosphorus (kg) = yearly sum of daily release volume (ML) x yearly long term mean total phosphorus concentration (mg/L)</p> <p>If, in considering the management hierarchy for surface or groundwater outlined in Section 14 of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019, a nutrient offset is required, additional conditions will be required (for further detail see sections 5.2 and 6.2).</p>
WT5	<p>The yearly sum of daily release volume (ML) and annual mass load of total nitrogen and total phosphorus released to waters must be calculated for each financial year.</p> <p><u>Intent</u></p> <p>To assess compliance with the annual mass load limits set in condition WT4.</p> <p><u>How to comply</u></p> <p>You must ensure that the yearly sum of daily release volume (ML) and annual mass load of total nitrogen and total phosphorus released to waters is prepared and submitted to the administering authority annually.</p> <p>This condition may be complied with by submitting the required calculations as part of the annual reporting required by conditions G26 and G27, however, you can request to change this condition where a particular reporting date is preferable. However, it is desirable for the industry to maintain a coordinated reporting date, which will assist both the administering authority and industry bodies in resourcing this work each year.</p>
WT6	<p>The total quantity of water released from <INSERT release point> during any day must not exceed <INSERT value>.</p> <p><u>Intent</u></p> <p>Where a point source release to surface waters is proposed, limits are set on the daily quantity released to ensure that the environmental values are protected. Both daily and annual limits are applied to permits to allow for flexibility in management of wastewaters.</p>

	<p><u>How to comply</u></p> <p>You must not exceed the daily release volume limit.</p> <p>Monitoring undertaken in line with the condition must demonstrate compliance with the limit in accordance with condition WT8.</p> <p>This limit will be developed in consultation with the administering authority's experts on surface waters based on your specific activity and the administering authority's Technical guideline-Licensing Wastewater release to Queensland waters (ESR/2015/1654).</p>
WT7	<p>The total quantity of water released from <INSERT release point> during any calendar year must not exceed <INSERT value>.</p>
	<p><u>Intent</u></p> <p>Where a point source release to surface waters is proposed, limits are set on the annual quantity released to ensure that the environmental values are protected. Both daily and annual limits are applied to permits to allow for flexibility in management of wastewaters.</p>
	<p><u>How to comply</u></p> <p>You must not exceed the annual release volume limit.</p> <p>Monitoring undertaken in line with the condition must demonstrate compliance with the limit in accordance with condition WT8.</p> <p>This limit will be developed in consultation with the administering authority's experts on surface waters based on your specific activity and the administering authority's Technical guideline-Licensing Wastewater release to Queensland waters (ESR/2015/1654).</p>
WT8	<p>The quantity of water released from <INSERT release point> must be determined, using a method with an accuracy of at least <INSERT accuracy required e.g. +/-5%> of the actual amount released, and recorded.</p>
	<p><u>Intent</u></p> <p>This condition will ensure that the release monitoring satisfies certain minimum requirements</p>
	<p><u>How to comply</u></p> <p>You must ensure the monitoring of water releases meets the accuracy requirements outlined in the condition.</p>
WT9	<p>Notwithstanding any other condition of this environmental authority, any release of contaminants to waters must not produce any slick or other visible evidence of oil or grease, nor contain visible floating oil, grease, scum, litter or other objectionable matter.</p>
	<p><u>Intent</u></p> <p>Certain contaminants are approved for release in release conditions. These are contaminants that are common to the release and for which an acceptable level of release has been determined. However, there may be contaminants in the waste streams that are unforeseen that may cause harm. This condition prevents the release of contaminants which might have a visual impact to the receiving waters.</p>

	<p><u>How to comply</u></p> <p>You must not release any discharge to waters that contains visible evidence of oil, grease, scum or litter. You should also implement a visual monitoring inspection schedule to ensure that any other contaminants which may cause environmental harm that may be visually present or change the appearance of the waste stream are identified prior to any release.</p>
WT10	<p>Notwithstanding any other condition of this environmental authority, wastewater must be directed from the discharge structure in a manner that does not erode or otherwise disturb mangrove vegetation, the stream banks or the habitat in general.</p>
	<p><u>Intent</u></p> <p>Certain quantities of water are approved for release at daily and annual scales. These are the quantities for which an acceptable volume has been determined, however the manner in which the waters are released may cause harm to the receiving environment if not appropriately managed. This condition prevents the manner in which wastewaters are released from disturbing the environmental values of the receiving environment.</p>
	<p><u>How to comply</u></p> <p>You must ensure that any releases of wastewater are managed in such a way as to prevent erosion or disturbances to mangrove vegetation, streambanks or the habitat in general.</p> <p>The following list identifies some of the ways that the risk of erosion can be managed. It is not exhaustive, and you are responsible for working out which measures are necessary to adequately manage the risk from your activity.</p> <ul style="list-style-type: none"> • Controlling release timing to prevent large quantities of outflow at any given time. • Installing scour protection to disperse outflows. • Supporting natural vegetation surrounding the release point. <p>Conducting monitoring of the environment adjacent to the release point and downstream habitats to identify potential impacts as an early warning.</p>
WT11	<p>All ponds, channels and containment structures used for the storage, use or treatment of aquaculture waters must be constructed and maintained:</p> <ol style="list-style-type: none"> a) to minimise the likelihood of any release of water through the bed or banks of the pond, channels or containment structures to any waters; and b) to ensure the stability of the ponds, channels or containment structures; and c) in accordance with the relevant edition of the Queensland Government guideline titled 'Guideline for constructing and maintaining aquaculture containment structures'.
	<p><u>Intent</u></p> <p>This condition sets the minimum standards for the construction of ponds and containment structures to prevent potential releases to waters, particularly groundwater.</p> <p>Setting minimum standards for the construction of ponds is intended to be a preventative approach to groundwater impacts as a result of the activity.</p>

	<p><u>How to comply</u></p> <p>You must ensure that all ponds, channels and containment structures used for the storage, use or treatment of aquaculture waters are constructed in accordance with the requirements of the condition.</p> <p>The Guideline for constructing and maintaining aquaculture containment structures (2007) is available in the following location: https://www.daf.qld.gov.au/__data/assets/pdf_file/0016/50803/Construction-Containment-Structures-Guidelines.pdf.</p>
WT12	<p>Contaminants from the activity must not be released to groundwater or to a location where they are likely to release to groundwater.</p>
	<p><u>Intent</u></p> <p>This condition will ensure there is no authorised release of contaminants to groundwater.</p>
	<p><u>How to comply</u></p> <p>You must not release contaminants to groundwater either directly or indirectly.</p>

6.1 Additional model operating conditions – net mass load

Water													
WT4 (net mass load)	<p>The annual net mass load of total nitrogen and total phosphorus released to waters from <INSERT release point> must comply with the limits listed in <i>Table 2 – Contaminant release to waters – annual net mass load limits</i>.</p> <p>Table 2 – Contaminant release to waters – annual net mass load limit</p> <table border="1"> <thead> <tr> <th>Release point</th> <th>Indicator</th> <th>Limit type</th> <th>Release limit</th> </tr> </thead> <tbody> <tr> <td></td> <td>Total nitrogen</td> <td>Maximum</td> <td>kg</td> </tr> <tr> <td></td> <td>Total phosphorus</td> <td>Maximum</td> <td>kg</td> </tr> </tbody> </table>	Release point	Indicator	Limit type	Release limit		Total nitrogen	Maximum	kg		Total phosphorus	Maximum	kg
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		Total nitrogen	Maximum	kg									
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<p><u>Intent</u></p> <p>Where a release of nutrients to surface waters is proposed, limits are set on the annual net mass load of total nitrogen and total phosphorus to ensure that the total nutrient load within the receiving waters remains below the threshold at which adverse impacts to environmental values are expected.</p>													
<p><u>How to comply</u></p> <p>You must ensure that the activity is managed in such a way that the annual net mass load of total nitrogen and total phosphorus released to waters complies with the limits outlined in Table 2.</p> <p>As per the definitions provided in Schedule 7.2, annual net mass load is calculated as follows:</p> <p style="text-align: center;">Annual net mass load = discharge mass load – intake mass load</p> <p>Where:</p> $\text{Intake mass load (tonnes)} = \frac{\text{Intake volume per day (ML)} * 365 * \frac{\text{mg}}{\text{L}} \text{ of intake}}{1000}$ $\text{Discharge mass load (tonnes)} = \frac{\text{Discharge volume per day (ML)} * 365 * \frac{\text{mg}}{\text{L}} \text{ of intake}}{1000}$ <p>If, in considering the management hierarchy for surface or groundwater outlined in Section 14 of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019, a nutrient offset is required, additional conditions will be required (for further detail see sections 5.2 and 6.2).</p>													
WT5 (net mass load)	<p>The yearly sum of daily release volume (ML) and annual net mass load of total nitrogen and total phosphorus released to waters must be calculated for each financial year.</p>												
	<p><u>Intent</u></p> <p>To assess compliance with the annual mass load limits set in condition WT4.</p>												
	<p><u>How to comply</u></p>												

	<p>You must ensure that the yearly sum of daily release volume (ML) and annual net mass load of total nitrogen and total phosphorus released to waters is prepared and submitted to the administering authority annually.</p> <p>This condition may be complied with by submitting the required calculations as part of the annual reporting required by conditions G26 and G27, however, you can request to change this condition where a particular reporting date is preferable. However, it is desirable for the industry to maintain a coordinated reporting date, which will assist both the administering authority and industry bodies in resourcing this work each year.</p>																														
WTNM1	<p>The intake water at location <INSERT location of intake water> must be monitored for the indicators and at the frequency specified in Table 1.</p> <p><u>Intent</u> The intent of this condition is to enable the calculation of net mass load.</p> <p><u>How to comply</u> You must monitor intake waters for the indicators, and at the frequency, specified in Table 1. This means that the parameters measured for the intake water quality will match those required for the discharge. It is preferable that the intake nutrient concentrations be monitored up stream of the mixing zone for the discharge to determine a reliable background level. This will ensure that there is no impact from potential background influences and that seasonal variations are captured. If it is not possible to monitor upstream an alternative monitoring point, which is reflective of the water quality of the intake water, should be proposed.</p>																														
WTNM2	<p>The quality of the receiving waters must be monitored at the monitoring points specified in <i>Table 3 - Receiving water impact monitoring points</i> for each indicator and at the monitoring frequency stated in <i>Table 4 - Receiving waters contaminant trigger level</i>.</p> <p>Table 3 - Receiving water impact monitoring points</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 25%;">Monitoring points¹</th> <th style="width: 30%;">Location description</th> <th style="width: 20%;">Latitude (decimal degree, GDA94)</th> <th style="width: 25%;">Longitude (decimal degree, GDA94)</th> </tr> </thead> <tbody> <tr> <td colspan="4">Impact monitoring points</td> </tr> <tr> <td>Monitoring point DS1</td> <td><INSERT location description, e.g. approx. 2 km downstream of discharge></td> <td></td> <td></td> </tr> <tr> <td>Monitoring point DS2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Monitoring point DS3</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Table 4 - Receiving waters contaminant trigger level</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">Indicator¹</th> <th colspan="3" style="width: 35%;">Median trigger limits²</th> <th style="width: 30%;">Monitoring frequency</th> </tr> </thead> <tbody> <tr> <td></td> <td style="width: 10%;">DS1</td> <td style="width: 10%;">DS2</td> <td style="width: 15%;">DS3</td> <td></td> </tr> </tbody> </table>	Monitoring points ¹	Location description	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)	Impact monitoring points				Monitoring point DS1	<INSERT location description, e.g. approx. 2 km downstream of discharge>			Monitoring point DS2				Monitoring point DS3				Indicator ¹	Median trigger limits ²			Monitoring frequency		DS1	DS2	DS3	
Monitoring points ¹	Location description	Latitude (decimal degree, GDA94)	Longitude (decimal degree, GDA94)																												
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Total nitrogen (µg/L)				Monthly, on outgoing tide ³														
Total phosphorus (µg/L)																		
Suspended solids (mg/)																		
Chlorophyll-a (µg/L)																		
<p>Intent</p> <p>Where a release of contaminants to surface waters and net mass load is proposed, limits are set on contaminants at impact sites to ensure that environmental values are protected.</p>	<p>How to comply</p> <p>You must not exceed the release limits for the relevant contaminants as set out within the conditions of your EA.</p> <p>Monitoring undertaken in line with the condition must demonstrate compliance with the release limits.</p> <p>Tables 3 and 4 will be developed in consultation with the administering authority's experts on surface waters based on your specific activity and the administering authority's Technical guideline 'Licensing Wastewater release to Queensland waters' (ESR/2015/1654). You will be advised of the proposed table prior to receiving the EA.</p>																	
<p>WTNM3</p> <p>If monitoring calculated over a 12 month period ending <INSERT end date, for example 30 June> at a monitoring point in <i>Table 3 - Receiving water impact monitoring points</i> shows an exceedance of a median trigger limit for any indicators in <i>Table 4 - Receiving waters contaminant trigger level</i>, an investigation must be undertaken that includes the following:</p> <ol style="list-style-type: none"> A Comparison of the monitoring to scheduled water quality objectives, historical monitoring and water quality measurements from reference sites to ascertain the cause of the limit exceedance; and A determination of the nutrient release load and concentrations from <INSERT discharge location(s)> during the period of the exceedance and compare this to release concentration and load limits; and Propose methods to reduce the volume and concentration of contaminants in wastewater released from <INSERT discharge location(s)> to achieve receiving environment trigger levels.; and If median of quality characteristics of the receiving water at impact monitoring points, calculated over a second consecutive 12 month period, exceed any of the median trigger limits specified in <i>Table 4 - Receiving waters contaminant trigger level</i>, revised discharge characteristics must be proposed for <INSERT discharge location(s)>, including release concentrations and load limits, which will ensure receiving water contaminant trigger levels are not exceeded in the future. 	<p>Intent</p> <p>The intent of this condition is to require further detailed investigation into any non-compliances with condition WTNM2 and trigger a review of water quality management.</p>																	

	<p><u>How to comply</u></p> <p>If an exceedance of the trigger limits occurs, have a suitably qualified person conduct an investigation that meets the requirements of the condition and develop a report that clearly demonstrates how each element of the condition has been considered.</p> <p>This condition is intended to operate concurrently with any compliance action that may be taken in response to non-compliances. It is intended to help you identify, as soon as possible, possible management actions that can be taken to bring the operation back into compliance.</p>
WTNM4	<p>A report of the investigation carried out under condition WTNM3 must be provided to the administering authority via WaTERS within 28 days of completion of the investigation.</p> <p><u>Intent</u></p> <p>This condition will ensure that contraventions that have a potential impact to waters will be reported via the departmental WaTERS portal. Delivery of data in this manner will align with the reporting requirements for water quality monitoring (see condition WT3) and ensure that data is delivered in the appropriate format for rapid response and comparative analysis, if required.</p> <p><u>How to comply</u></p> <p>You are required to submit reports relating to a potential impact to waters via the departmental WaTERS portal.</p> <p>Further information on submitting water release monitoring and tracking data via the WaTERS portal is available in the following location: https://science.des.qld.gov.au/government/science-division/waters.</p>

6.2 Additional model operating conditions – offset

Water													
WT4 (offset)	<p>The annual mass load (offset) of total nitrogen and total phosphorus released to waters from <INSERT release point> must comply with the limits listed in <i>Table 2 – Contaminant release to waters – annual mass load limits</i>.</p> <p>Table 2 – Contaminant release to waters – annual mass load (offset) limit</p> <table border="1"> <thead> <tr> <th>Release point</th> <th>Indicator</th> <th>Limit type</th> <th>Release limit</th> </tr> </thead> <tbody> <tr> <td></td> <td>Total nitrogen</td> <td>Maximum</td> <td>kg</td> </tr> <tr> <td></td> <td>Total phosphorus</td> <td>Maximum</td> <td>kg</td> </tr> </tbody> </table> <p><u>Intent</u></p> <p>Where a release of nutrients to surface waters is proposed, limits are set on the annual net mass load (offset) of total nitrogen and total phosphorus to ensure that the total nutrient load within the receiving waters remains below the threshold at which adverse impacts to environmental values are expected.</p> <p><u>How to comply</u></p> <p>You must ensure that the activity is managed in such a way that the annual mass load (offset) of total nitrogen and total phosphorus released to waters complies with the limits outlined in Table 2.</p> <p>As per the definitions provided in Schedule 7.3, annual mass load (offset) is calculated as follows:</p> <p>Annual mass load (offset) total nitrogen (kg) = annual mass load TN (kg) – offset Total nitrogen (kg).</p> <p>Annual Mass Load (offset) total phosphorus (kg) = annual mass load TP (kg) – Offset Total phosphorus (kg).</p>	Release point	Indicator	Limit type	Release limit		Total nitrogen	Maximum	kg		Total phosphorus	Maximum	kg
Release point	Indicator	Limit type	Release limit										
	Total nitrogen	Maximum	kg										
	Total phosphorus	Maximum	kg										

	<p>For this calculation, the offset total nitrogen (kg) and offset total phosphorus (kg) values will be determined within the nutrient offset, which is a project designed in accordance with the <i>Point Source Water Quality Offsets Policy 2019</i> as agreed to with the administering authority.</p> <p>Please note: In order to assess a proposal for a site based offset project in accordance with the policy, a description of the project design and deliverables should be provided that includes, at a minimum, the following information:</p> <ul style="list-style-type: none"> - A consideration of the management hierarchy for surface or groundwater outlined in Section 14 of the Environmental Protection (Water and Wetland Biodiversity) Policy 2019. See Section 6.6 of the Policy for further detail. - A demonstration of how the offset will meet the principles of the policy and requirement of improved water quality in the receiving environment, including: <ul style="list-style-type: none"> o Detail on the current water quality impacts at the selected site, <ul style="list-style-type: none"> ▪ A detailed description of the site, including current land use ▪ A consideration as to whether it will be a direct or indirect offset (i.e. will the benefits be realised in the mixing zone of the waters impacted by the activity) ▪ Baseline monitoring data. o A comprehensive description of the offset including the management actions <ul style="list-style-type: none"> ▪ Proposed new land use ▪ Detail on how the land will be managed as an offset, for example, by establishing and maintaining appropriate native vegetation. ▪ Modelling demonstrating expected outcome, including a description of the model and explanation as to how input values were established. ▪ A comparison of the modelled outcome and the baseline scenario. ▪ An operational management plan that considers the long-term operations and maintenance of the offset site. ▪ A monitoring plan that details how the site will be monitored to demonstrate compliance on an annual basis. ▪ Details of any staging due to staging of the underlying aquaculture activity (if applicable). ▪ The delivery ratio (the default ratio is 1:1.5) ▪ Detail on the timing of implementation. The offset must be delivered and fully operational prior to the impact from the activity occurring at a scale which requires an offset. o Identify if there will be any additionality as a result of the offset (for example, job creation for maintenance of the site). <p>If seeking an offset, it is strongly recommended that you seek a pre-lodgement meeting to discuss your proposal before submitting an application. To arrange a free pre-lodgement meeting with the department, contact Permit and Licence Management (PaLM) on 13 74 68 or at palm@des.qld.gov.au.</p>
<p>WT5 (offset)</p>	<p>The yearly sum of daily release volume (ML) and annual mass load (offset) load of total nitrogen and total phosphorus released to waters must be calculated for each financial year.</p> <p><u>Intent</u></p> <p>To assess compliance with the annual mass load limits set in condition WT4.</p> <p><u>How to comply</u></p> <p>You must ensure that the yearly sum of daily release volume (ML) and annual mass load (offset) of total nitrogen and total phosphorus released to waters is prepared and submitted to the administering authority annually.</p> <p>This condition may be complied with by submitting the required calculations as part of the annual reporting required by conditions G26 and G27, however, you can request to change this condition</p>

	<p>where a particular reporting date is preferable. However, it is desirable for the industry to maintain a coordinated reporting date, which will assist both the administering authority and industry bodies in resourcing this work each year.</p>
WTO1	<p>The quarterly mass load of total nitrogen and total phosphorus released to waters must be calculated and submitted to the administering authority within one month of the end of the quarter to which it relates for the first < <i>INSERT timeframe e.g. two (2) years</i> > years of operation.</p>
	<p><u>Intent</u></p> <p>The intent of this condition is to provide a higher frequency of reporting during the early stages of the offset to minimise the risk of significant exceedances that may cause environmental harm. It will provide the administering authority with a greater understanding of how the release of nutrients will be timed throughout the year and provide an indication of the risk of acute stress in the receiving environment.</p> <p>Having the report submitted to the administering authority within one month ensures action can be taken prior to environmental harm occurring, should it be necessary.</p>
	<p><u>How to comply</u></p> <p>You must ensure that the mass loads of total nitrogen and total phosphorus released to waters are reported to the administering authority in accordance with the requirements of the condition for the period specified.</p> <p>This condition is in addition to the annual reporting required by condition G26.</p>
WTO2	<p>An offsite nutrient reduction action must be undertaken in accordance with <<i>INSERT approved offset proposal</i>>.</p>
	<p><u>Intent</u></p> <p>This condition will ensure the measures in the nutrient offset plan are undertaken in accordance with the plan.</p>
	<p><u>How to comply</u></p> <p>You must ensure that the actions outlined in the nutrient offset to counter-balance a point source nutrient release are carried out in accordance with that plan as agreed with the administering authority.</p>
WTO3	<p>A report reviewing the effectiveness of the offsite nutrient reduction action must be prepared by an appropriately qualified person.</p>
	<p><u>Intent</u></p> <p>To ensure the preparation of a report reviewing the performance of the offsite nutrient reduction action.</p>
	<p><u>How to comply</u></p> <p>You must ensure that the report is prepared and submitted to the administering authority by the date specified in condition WTO6.</p>

WTO4	<p>The report required by condition WTO3 must:</p> <ul style="list-style-type: none"> a) be based on monitoring results obtained during the delivery of the offsite nutrient reduction action; and b) with reference to the results of the receiving environment monitoring program required under condition G19 during the time the nutrient offset has been in place, determine if the delivery of the offsite nutrient reduction action has been effective in preventing or mitigating harm from releases of nutrients from the activity on the receiving environment; and c) provide recommendations for the continued delivery of an offsite nutrient reduction action following <i><INSERT date 1 month prior to the offset program expiry, or date 4 years and 11 months issue, whichever is sooner></i> or outline how the annual mass load (offset) will be met without the nutrient offset. <p><u>Intent</u></p> <p>This condition will ensure that the annual monitoring report satisfies certain minimum requirements to ensure that the values of the receiving environment will be appropriately monitored. The requirements may vary from site to site.</p> <p><u>How to comply</u></p> <p>To comply with this condition the annual monitoring report must include all of the information specified under this condition (prepared by a suitably qualified person as required), as a minimum requirement.</p>
WTO5	<p>The report required by condition WTO3 must be submitted to the administering authority by <i><INSERT date 1 month prior to the offset program expiry, or date 4 years and 11 months issue, whichever is sooner></i>.</p> <p><u>Intent</u></p> <p>To ensure the preparation of the report required by condition WTO3 is submitted to the administering authority with sufficient time for review before the expiry of the nutrient offset.</p> <p><u>How to comply</u></p> <p>You must ensure that the report is prepared and submitted to the administering authority by the date specified in condition WTO5.</p>

7 Definitions²

Note that where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

The shortlist of defined terms under section 7.1 below will generally apply to all environmental authorities.

Other shortlists of defined terms may be relevant depending on the purpose of the environmental authority. Specific definitions are presented under:

- Section 7.2 for where a net mass load is sought (i.e. where conditions from Section 5.1 were used).
- Section 7.3 for where an offset proposal forms part of the application (i.e. where conditions from Section 5.2 were used).

7.1 Definitions, general

24 hour storm event with an average recurrence interval of 1 in 10 years means the maximum rainfall depth from a 24-hour duration precipitation event with an average recurrence interval of once in 10 years. For example, an Intensity–Frequency–Duration table for a 24-hour duration event with an average recurrence interval of 1 in 10 years, identifies a rainfall intensity of 8.2mm/hour. The rainfall depth for this event is therefore 24 hour x 8.2mm/hour = 196.8mm.

Activity means the environmentally relevant activities, whether resource activities or prescribed activities, to which the environmental authority relates.

Acid sulfate soils means a soil, sand, mud or clay containing significant levels of pyrite (iron sulphide), which on exposure to oxidising conditions results in, or has the potential to result in, the generation of sulphuric acid in quantities greater than the inherent buffer capacity of the soil.

Administering authority means the Department of Environment and Science or its successors or predecessors.

Affected water means water that has come into contact with diseased, or potentially diseased, organisms.

Alert levels means tiers in a hierarchy of increasing environmental risk and are defined by **trigger values**. Three **alert levels** (low, moderate, and high) are typically used in a management action framework to indicate adverse conditions and guide management responses that aim to prevent and minimise environmental harm.

Annual mass load is calculated as follows:

Annual mass load total nitrogen (kg) = yearly sum of daily release volume (ML) x yearly long term **mean** total nitrogen concentration (mg/L)

Annual mass load total phosphorus (kg) = yearly sum of daily release volume (ML) x yearly long term **mean** total phosphorus concentration (mg/L)

Note: calculations should be undertaken on a rolling basis based on nutrient sampling.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills and experience relevant to the environmental authority (EA) requirement and can give authoritative assessment, advice and analysis in relation to the EA requirement using relevant protocols, standards, methods or literature.

Commercial place means a place, or part of a place, used as a workplace, an office or for business or commercial purposes.

Day means any continuous 24 hour period.

² Note to **administering authority** officers: These definitions have been developed for consistent use across the State. However it is recognised that in rare circumstances, a definition might need to be amended to fit a particular type of operation. Delete this footnote once the definition has been added into the environmental authority. You should also carefully consider the definitions of **sensitive place** and **commercial place** when issuing an environmental authority and if both definitions are appropriate to be included in condition A1 given the proposed location of the **activity**.

Environmental complaints means an expression of dissatisfaction, concern or report, whether written or verbal, about the activity and/or its impact on the environment.

Environmental nuisance as defined in Chapter 1 of the *Environmental Protection Act 1994*.

Environmental harm as defined in Chapter 1 of the *Environmental Protection Act 1994*

Environmental value as defined in Chapter 1 of the *Environmental Protection Act 1994*.

Financial assurance as defined in Chapter 5 of the *Environmental Protection Act 1994*.

Financial year means a period of one year beginning on 1 July.

Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

Land does not include **waters**.

Measures have the broadest interpretation and includes plant, equipment, physical objects, monitoring, procedures, actions, directions and competency.

NATA means National Association of Testing Authorities.

Pond includes a tank, channel or containment structure:

- a) used to hold, or cultivate, freshwater, marine or estuarine organisms; or
- b) used for the storage, use or treatment of aquaculture waters.

Prescribed water contaminants means contaminants listed within Schedule 10 of the Environmental Protection Regulation 2019.

Receiving environment monitoring program means a monitoring program designed to monitor and assess the potential impacts of controlled and/or uncontrolled releases of contaminants to the environment from the **activity**.

Records include breach notifications, written procedures, monitoring data, analysis results, monitoring reports and monitoring programs required under a condition of this authority.

Secondary containment system means a system designed, installed and operated to prevent any release of contaminants from the system, or containers within the system, to land, **groundwater**, or surface waters.

Sensitive place includes places and parts of places as follows:

- a) a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- b) a motel, hotel or hostel; or
- c) a kindergarten, school, university or other educational institution; or
- d) a medical centre or hospital; or
- e) a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- f) a public park or garden; or
- g) for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2019.

Total nitrogen means the sum of Organic Nitrogen, Ammonia Nitrogen, Nitrite plus Nitrate Nitrogen, expressed as mg/L as Nitrogen. This includes both the inorganic and organic fraction of nitrogen.

Total phosphorus means the sum of the reactive phosphorus, acid-hydrolysable phosphorus and organic phosphorus, as mg/L of phosphorus. This includes both the inorganic and organic fraction of phosphorus.

Trigger values are physicochemical, parameter-specific measurement values used to indicate a condition where an **environmental value** or sensitive receptor may be at low, moderate or high risk, or some other risk-related indicator.

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank 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.

WaTERS is the Water Tracking and Electronic Reporting System (WaTERS) database formally known as the Point Source Database (PSD).

7.2 Definitions, net mass load

Annual net mass load is calculated as follows:

$$\text{Annual net mass load} = \text{discharge mass load} - \text{intake mass Load}$$

Where:

$$\text{Intake mass load (tonnes)} = \frac{\text{Intake volume per day (ML)} * 365 * \frac{\text{mg}}{\text{L}} \text{ of intake}}{1000}$$

$$\text{Discharge mass load (tonnes)} = \frac{\text{Discharge volume per day (ML)} * 365 * \frac{\text{mg}}{\text{L}} \text{ of intake}}{1000}$$

7.3 Definitions, offset

Annual mass load (offset) is the mass load following the application of the offset, calculated as follows:

Annual mass load (offset) total nitrogen (kg) = annual mass load total nitrogen (kg) - **offset total nitrogen (kg)**.

Annual mass load (offset) total phosphorus (kg) = annual mass load total phosphorus (kg) - **offset total phosphorus (kg)**.

Nutrient offset means the project developed in accordance with the *Point Source Water Quality Offsets Policy 2019* or more later versions, as agreed to by the **administering authority**.

Offsite nutrient reduction action means an action taken to counter-balance a point source nutrient release as outlined within the **nutrient offset**.

Offset total nitrogen (kg) means the offset permitted by the **nutrient offset** for the duration of the offset project. If the project does not specify a duration that the offset is to apply, the offset expires after 5 years from the approval of the offset, and the value of offset total nitrogen (kg) becomes 0.

Offset total phosphorus (kg) means the offset permitted by the **nutrient offset** for the duration of the offset project. If the project does not specify a duration that the offset is to apply, the offset expires after 5 years from the approval of the offset, and the value of offset total phosphorus (kg) becomes 0.