

Coolamon Shire Council  
55 Cowabbie Street (PO Box 101)  
COOLAMON NSW 2701



# Pollution Incident Response Management Plan

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## Coolamon Sewerage Treatment Plant and Reuse Facility

Environment Protection Licence L7306

Revision 1

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# 1 Introduction

This Pollution Incident Response Management Plan (PIRMP) has been developed to document the processes required to prepare for and respond to pollution incidents for the Coolamon Sewerage Treatment Plant and Reuse Facility (Coolamon STPRF) and associated reticulation network as licenced by Environment Protection Licence L7306. It is to ensure that hazards to the environment, human health and safety are reduced and, where it is achievable, eliminated.

It has been prepared in accordance with the requirements of the *Protection of the Environment Operations Act 1997* and *Protection of the Environment Operations (General) Regulation 2009*.

## 1.1 Scope

This PIRMP applies to the Coolamon Sewerage Treatment Plant and Reuse Facility and the associated reticulation network covered by Environment Protection Licence L7306.

The town of Coolamon is serviced by approximately 41km of gravity sewer mains, ranging in size from 150mm ID through to 450mm ID. There are no pumping stations within the public network. The Wastewater Treatment and Reuse Facility is comprised of two treatment processes – a trickling filter plant and Pasveer channel - operating in parallel and sharing common head works and tertiary ponds. The treated effluent is then, depending on the time of year, stored for future municipal irrigation or discharged to the environment.

The Reuse network comprises a storage dam of 140ML capacity and a discharge dam of 10ML capacity. Treated effluent is disinfected through exposure to sodium hypochlorite before being delivered to Coolamon Sport & Recreation Club's Golf Course and the Kindra Park football grounds.

## 2 Description and Likelihood of Hazards

Potential hazards to the environment may be present either from overflow and/or by-passes within the network and treatment processes or from the chemicals that are stored and utilised in the treatment of the effluent.

The discharge of raw or partially treated sewage may cause a pollution incident following a number of events including:

- Adverse weather – power disruptions and excessive flows
- Blockages in the reticulation network
- Damage to reticulation assets
- Infrastructure failures
- Mechanical breakdown
- Power outage
- Illegal dumping

Chemicals used in the treatment of wastewater and for disinfection of wastewater products may also result in a pollution incident, caused by:

- Storage failure
- Delivery failure
- Reticulation failure
- Inappropriate or accidental use
- Vandalism

## 3 Pre-emptive Measures

Given the nature of the sewerage network, in many instances it is difficult to implement pre-emptive measures against pollution incidents. However, where possible steps have been taken to implement pre-emptive measures, particularly at the STPRF.

Table 1 outlines hazards and the pre-emptive measures taken to protect against the occurrence of those hazards.

**Table 1 Existing Pre-emptive Measures**

<b>Asset Category</b>	<b>Hazard</b>	<b>Pre-emptive measure(s)</b>
STPRF	Chlorine leak from storage area	Bunding of storage area
STPRF	Chlorine leak from pipework	Bunding of pipework drained to in-ground waste point
STPRF	Chlorine pump failure	Alarm on power supply to chlorine pump
STPRF	Power disruption causes plant failure and by-pass	Alarm on main power supply to STPRF



## **4 Incident Response**

In the event of an incident occurring, the following procedures, where relevant, are to be followed.

### **4.1 Pollution Incident**

For the purpose of this plan, pollution incidents have been grouped as either sewage overflows or bypasses, or chemical spills.

#### **4.1.1 Sewage Overflows and Bypasses**

If there is an immediate threat to human health or safety, call triple zero "000". "112" may be used if using a mobile telephone.

Notification of a sewage overflow or bypass may be received from a member of the public or staff may become aware of the incident; the latter is especially the case during a bypass of the STPRF. During business hours notification from the public may be received by either staff on the Coolamon Shire Council switch or staff at the STPRF. If the former is the case, staff on the switch will then notify the STPRF.

A number of documents outline agreed response times within which crews must respond to notification of incidents.

Coolamon Shire Council has no procedural documentation for responding to overflows and bypasses. Staff are required to take necessary measures to first contain the spill, then restore the service and then clean up the site.

In the event of an incident that results in actual or potential harm to the health or safety of the community or that threatens potential or material harm to the environment, refer to section 4.2.

Staff are required to record the incident using council's internal maintenance management system which, in turn automatically populates and sends a *Report to Environment Incident Hotline* form to the Assistant Engineer. This form serves as the basis for the written report that is forwarded to the Environment Protection Agency (EPA) in the event that the incident is reported.

#### **4.1.2 Chemical Spills**

If there is an immediate threat to human health or safety, call triple zero "000". "112" may be used if using a mobile telephone.

Notification of a chemical spill at the STPRF is more than likely going to come directly from the staff attending the facility.

Coolamon Shire Council has no procedural documentation for responding to chemical spills at the STPRF. Staff are required to act in accordance with any directives that may be found in the relevant material safety data sheet in containing and cleaning up a chemical spill.

In the event of an incident that results in actual or potential harm to the health or safety of the community or that threatens potential or material harm to the environment, refer to section 4.2.

## 4.2 Contact Details

In the event of an incident that results in actual or potential harm to the health or safety of the community or that threatens potential or material harm to the environment, the General Manager or senior operator in charge must be immediately notified, who shall then notify the relevant agencies. The contact details of the key staff are outlined in Table 2.

Table 2 Internal Contact Details

Position	Name	Contact Phone Number
General Manager	Tony Donoghue	69301800
Senior Operator-in-Charge	Peter Bartholomew	69301800

The following contact numbers were correct at the time of publication. No warranty is given to their accuracy following publication of this plan.

Table 3 External Agency Contact Details

Agency/Stakeholder	Contact Phone Number
Fire & Rescue NSW	000
Ambulance	000
Environment Protection Agency	131 555
Ministry of Health - Goulbourn Public Health Unit	(02) 4824 1840 (02) 6080 8900 (After hours contact)
Work Cover	13 10 50

If there is an immediate threat to human health or safety, call triple zero "000". "112" may be used if using a mobile telephone.

## 5 Community Notification of Incidents

Impacts on the community from an environment incident at either the STPRF or at a point in the sewerage network will vary greatly and depend on many factors such as topography, duration, location within the network, etc.

For this reason communication methods will vary depending on the circumstances of the environment incident. In all situations, Coolamon Shire Council will attempt to provide as early a warning to the affected community as is practicable by any means deemed appropriate. Methods of communication may include, but not necessarily be limited to:

- Telephone/SMS
- Doorknocks/letter drops
- Media releases
- Social media announcements
- Warning signs

Of the potential environment incidents that may impact on the community, the incidents with the greatest potential to impact on the community are:

- Significant overflow of sewage into the urban stormwater network
- Significant volume of sewage by-passes the STPRF
- Significant volume of effluent is discharged without disinfection

In the event of a significant overflow of sewage into the urban stormwater drainage network, council staff are to erect prominent signage advising any users of the risk of contamination of that waterway. Testing of that waterway will be undertaken until faecal coliform levels return to baseline conditions at which point the signage will be removed and the community notified by any of the above means.

If effluent is discharged to any of the disposal points nominated in the Environment Protection Licence without having first been disinfected council staff shall notify the occupiers of that land in the case of the sporting ovals. It may be necessary to close the ovals and in this case this will be communicated to the various sporting clubs that utilise the ovals by way of a sign that is to be erected at each entrance to the ovals and for prolonged closures letters to those clubs affected.

### 5.1 Sensitive Development

Sensitive development includes those developments that, by their nature, may be more susceptible to the impacts or effects of a pollution incident. They include institutions such as schools, hospitals, nursing homes, etc and other industries that may be impacted in such a way that they in turn may experience a pollution incident.

There are no sensitive developments in proximity to the STPRF that may be impacted by any environment incident.

## **6 Harm Minimisation to Persons on the Premises**

Due to the nature of the dominant pollutant at the STPRF, namely effluent of varying levels of treatment, there are no harm minimisation arrangements beyond standard operating requirements of appropriate use of personal protection and safety equipment.

### **6.1 Personal Protection and Safety Equipment**

As part of the action toward minimising harm to persons on the premises, the following personal protection and safety equipment is issued or made available:

- Gas monitor
- Life rings
- Rubber gloves
- Safety glasses
- Gumboots
- Safety boots

### **6.2 Pollutants**

Only a small number of pollutants are either kept on the premises or handled at the premises. These pollutants are related to the operation of the STPRF and include raw, partially treated and treated sewage.

For a full list of pollutants, see section A2.



## **7 Staff Training**

To introduce the Pollution Incident Response Management Plan, an Induction and Training Program has been developed. All staff involved with the operation of the STPRF will have to complete this training.

The Council will explore the option of having completion of this ITP as a prerequisite for contractors who wish to be included on any pre-qualification list.

## A1. Appendix – Risk Assessment

### A1.1. Risk Analysis

The following is taken from the *Sewage Infrastructure Risk Management Plan, 2011*:

*“Credible risks which have been identified during the risk identification stage were analysed. This process takes into account the ‘likelihood’ and the ‘consequences’ of the event. The objective of the analysis is to separate the minor acceptable risks from the major risks and to provide data to assist in the assessment and management of risks.*

*The risk analysis process is applied to all credible risks to determine levels of risk. The process acts as a filter by applying a reasoned and consistent process. Minor risks can be eliminated from further consideration and dealt with within standard operating procedures.*

*The remaining risks will therefore be of such significance as to consider the development of risk treatment options and plans.”*

Likelihood is a qualitative description of chance of an event occurring. The process of determining likelihood involves combining information about estimated or calculated probability, history or experience. Where possible it is based on past records, relevant experience, industry practice and experience, published literature or expert judgement. For a list of likelihood categories and their descriptors see Table 4.

Consequences are a qualitative description of the outcome of an event affecting objectives. The process of determining consequences involved combining information about estimated or calculated effects, history and experience. For a list of consequence categories and their descriptors, see Table 5.

**Table 4 Likelihood Qualitative Descriptors**

Likelihood	Descriptor	Probability of occurrence
Rare	May occur only in exceptional circumstances	More than 20 years
Unlikely	Could occur at some time	Within 10-20 years
Possible	Might occur at some time	Within 3-5 years
Likely	Will probably occur in most circumstances	Within 2 years
Almost certain	Expected to occur in most circumstances	Within 1 year

**Table 5 Consequence Qualitative Descriptors**

Consequence	Injury	Service Interruption	Environment	Finance	Reputation
Insignificant	Nil	< 4 hrs	Nil	< \$20k	Nil
Minor	First Aid	Up to 1 day	Minor short term	\$20k - \$100k	Minor media
Moderate	Medical treatment	1 day – 1 week	Wide short term	\$100k - \$500k	Moderate media
Major	Disability	1 week – 1 month	Wide long term	\$500k - \$1M	High media
Catastrophic	Fatality	More than 1 month	Irreversible long term	> \$1M	Censure/Inquiry

The risk assessment process compares the likelihood of a risk event occurring against the consequence of the event occurring. In the risk rating table, see Table 6, a risk event with a likelihood of 'Possible' and a consequence of 'Major' has a risk rating of 'High'.

The risk rating, see

Table 7, is used to determine risk treatments. Risk treatments can range from immediate corrective actions for 'Very High' risks to manage by routine procedures for 'Low' risks.

**Table 6 Risk Assessment Matrix**

Risk Rating					
Likelihood	Consequences				
	Insignificant	Minor	Moderate	Major	Catastrophic
Rare	L	L	M	M	H
Unlikely	L	L	M	M	H
Possible	L	M	H	H	H
Likely	M	M	H	H	VH
Almost Certain	M	H	H	VH	VH

**Table 7 Risk Rating**

Risk Rating	Action Required and Timing
VH	Very High Risk Immediate corrective action
H	High Risk Prioritised action required
M	Medium Risk Planned action required
L	Low Risk Manage by routine procedures



## A1.2. Risk Assessment

Table 8 Risk Assessment

Hazard	Service or Asset at Risk	Impact on Service or Asset	Likelihood	Consequence	Risk Rating
Adverse weather	STPRF	Power disruption leads to operating faults, by-pass of plant or discharge of partially treated effluent	Possible	Minor	Medium
	Sewage Reticulation	High intensity rainfall leads to surcharge of network	Likely	Moderate	High
Blockages	Sewage Reticulation	Foreign material, roots or poor quality mains cause blockage and surcharge of raw sewage to environment	Likely	Minor	Medium
	STPRF	Unauthorised access by others may disrupt plant operations and lead to by-pass and/or discharge of partially treated effluent	Unlikely	Minor	Low
Infrastructure failure	Sewage Reticulation	Damage to network from excavation or other works leads to release of raw sewage to environment	Possible	Minor	Medium
	STPRF	Ageing infrastructure results in failures and by-pass or discharge of partially treated effluent	Unlikely	Moderate	Medium
Mechanical breakdown	Sewage Reticulation	Ageing infrastructure results in failures or blockages and discharge of raw sewage to environment	Possible	Minor	Medium
	STPRF	Results in by-pass or discharge of partially treated effluent	Unlikely	Moderate	Medium
Power outage	STPRF	Power demand from WWTRF surpasses capacity of transformer and limits or eliminates some processes	Unlikely	Major	Medium
Illegal dumping	STPRF	High strength sewage disrupts biological processes and results in substandard treatment	Possible	Moderate	High
	Sewage Reticulation	High flows surcharge low capacity mains	Unlikely	Minor	Low
Reticulation failure	Effluent Reticulation	Failure of effluent reticulation infrastructure leads to discharge of treated effluent to environment	Possible	Minor	Medium
Chemical storage failure	STPRF	Chlorine storage failure results in release of chlorine to environment	Rare	Moderate	Medium
Chlorine delivery failure	STPRF	Spill occurs during delivery of chlorine ie failure occurs outside bund	Rare	Moderate	Medium



Hazard	Service or Asset at Risk	Impact on Service or Asset	Likelihood	Consequence	Risk Rating
Chemical reticulation failure	STPRF	Chlorine reticulation infrastructure fails resulting in release of chlorine to environment	Rare	Minor	Low
Inappropriate or improper use	STPRF	Inappropriate or improper use of chlorine results in discharge of pollutant to environment	Unlikely	Moderate	Moderate
Vandalism	STPRF	Vandalism of chlorine storage, bund or reticulation infrastructure results in discharge of pollutant to environment	Rare	Moderate	Moderate

## A2. Inventory of Pollutants

The following pollutants may be found on the premises:

MSDS	Chemical Name	Manufacturer	MSDS Expiry Date	Maximum Volume Stored	Location of Chemical
N/A	Sewage	N/A	N/A	160ML	Throughout
	Sodium Hypochlorite			1000L	Effluent Pump Shed

### **A2.1. Report to Environment Incident Hotline**

Part A of the form is automatically populated from information entered into Reflect by the attending staff member. Based on this information, the Environmental and Health Services Officer then makes the decision whether or not the incident warrants reporting to the Environment Incident Hotline. If it does, the remainder of the form is completed and serves as the foundation for the written report that must be forwarded to the EPA within seven days of the incident.

## PART A – SEWER OVERFLOW OR BYPASS

### Report to Environmental Incident Hotline

#### LOCATION OF INCIDENT

Recent changes to Part 5.7 of the *Protection of the Environment Operations Act 1997* (POEO Act) specify new requirements relating to the notification of pollution incidents. For more information, see [www.environment.nsw.gov.au/pollution/notificationprotocol.htm](http://www.environment.nsw.gov.au/pollution/notificationprotocol.htm)

Street Address	Suburb
«Incident_Location»	Coolamon
Primary Location	Location
«Primary_Location»	«Location»
Where did the incident occur?	
Receiving environment	
«Receiving_Environment»	

<MAP>

Incident Type	Map	Probable Cause
«Incident_Type»		«Probable_Cause»
Description Incident		
«Incident_Description»		
Damage to Property	«Damage_To_Property»	Estimated Overflow «Estimated_Volume» kL
Work carried out to stop overflow		
«Work_Done_Onsite»		
Work carried out to clean up		
«Cleanup_Details»		
Follow up work required? «Follow_Up_Work_Required»		

Incident No.	«Incident_Number»	Employee	«Employee»
Time Call Received	«Time_Call_Received»	Date Call Received	«Date_Call_Received»
Arrival Time	«Time_Arrival_At_Site»	Date of Arrival	«Date_Arrival_At_Site»
Conforms With Response Time?			
«Conforms_With_Response_Time»			
Advice Received From			
«Advice_Received_From»			



## PART B – SEWER OVERFLOW OR BYPASS

# Report to Environmental Incident Hotline

## INVESTIGATION

The appropriate Manager is responsible for completion of Part B of the incident report.

### Immediate Action by Manager

#### Will the incident:

- |   |                              |                             |                                   |
|---|------------------------------|-----------------------------|-----------------------------------|
| 1. Require assistance from other agencies to contain, isolate or clean-up?<br>If "Yes" call 000 immediately   | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Sure <input type="checkbox"/> |
| 2. Pose any actual or potential harm to human health that is not trivial?<br>• Is it located within 100m of a school, childcare centre, aged care home?<br>• Could it impact on users of public areas such as ovals, reserves, waterways?<br>• Could the impact spread and potentially harm occupants of nearby properties? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Sure <input type="checkbox"/> |
| 3. Pose any actual or potential harm to ecosystems that is not trivial?<br>• Could the incident flow/impact on a water body or drainage system?<br>• Could the incident flow/impact on environmentally sensitive land?  | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Sure <input type="checkbox"/> |
| 4. Result in actual or potential loss or property damage of an amount over \$10,000   | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Sure <input type="checkbox"/> |

If you answered 'YES' to any of the above then the incident should be considered as a notifiable "pollution event". There is a **duty to notify** the EPA and/or Ministry of Health, WorkCover and Fire and Rescue NSW immediately after becoming aware of a pollution incident where material harm is caused or threatened. Failure to do so is an offence (*Protection of the Environment Operations Act 1997*).

### Agency Notifications

If the incident does not require an initial combat agency, or once the 000 call has been made, notify the relevant authorities in the following order.

#### NSW EPA (EPA Environmental Line: 131 555)

Contacted  Yes  No Reason not contacted: \_\_\_\_\_

Name of EPA Representative \_\_\_\_\_ Time and Date \_\_\_\_\_ EPA Reference No. \_\_\_\_\_

Actions Required by EPA \_\_\_\_\_

#### NSW Health – Local Public Health Unit (See [www.health.nsw.gov.au/publichealth/infectious/phus.asp](http://www.health.nsw.gov.au/publichealth/infectious/phus.asp))

Contacted  Yes  No Reason not contacted: \_\_\_\_\_

Name of PHU Representative \_\_\_\_\_ Time and Date \_\_\_\_\_ PHU Reference No. \_\_\_\_\_

Actions Required by PHU \_\_\_\_\_

#### WorkCover Authority (WorkCover: 13 10 50)

Contacted  Yes  No Reason not contacted: \_\_\_\_\_

Name of WorkCover Representative \_\_\_\_\_ Time and Date \_\_\_\_\_ EPA Reference No. \_\_\_\_\_

Actions Required by WorkCover \_\_\_\_\_

#### Fire & Rescue NSW (Emergency Hotline: 000)

Contacted  Yes  No Reason not contacted: \_\_\_\_\_

Name of Fire & Rescue Representative \_\_\_\_\_ Time and Date \_\_\_\_\_ Fire & Rescue Reference No. \_\_\_\_\_

Actions Required by Fire & Rescue \_\_\_\_\_

**PART B – SEWER OVERFLOW OR BYPASS**

**Report to Environmental Incident Hotline**



**Other Notifications to Consider**

<input type="checkbox"/>	Internal eg Health Department
<input type="checkbox"/>	Media
<input type="checkbox"/>	NSW Food Authority
<input type="checkbox"/>	Waterway users
<input type="checkbox"/>	Education centres
<input type="checkbox"/>	Other <input type="text"/>