

**Pollution Incident Response Management Plan
Guyra Waste Water Treatment Plant (Licence 1671)**

April 2021 Version 8

Unleash the opportunities

Revision History

REVISION	DATE	AUTHOR/REVIEWER	DETAILS
Draft	01/2012	Ned Mozzell	
Final	02/2012	Ned Mozzell	For Operations
Revision 1	04/2015	Ralf Stoeckeler	Complete rewrite V3
Revision 2	04/2015	Ralf Stoeckeler	Updated with comments from Bob Patterson V3A
Revision 3	10/2016	Mark Burgess	Desktop review V3B
Revision 4	02/2018	Manish Khadgi	Desktop review
Revision 5	05/2018	Manish Khadgi	Update after STP incident in March 2018
Revision 6	04/2019	Manish Khadgi	Desktop review
Revision 7	04/2020	Rodney Bull	Desktop review
Revision 8	04/2021	David Bell	Desktop review

Emergency Contact Details

NAME	POSITION	CONTACT DETAILS
Rodney Bull	Team Leader – Water & Sewer	0439 077 558
Guyra After hours	On Call Operator	0427 791 178
Manish Khadgi	Operations Engineer	0428 829 660
Mark Byrne	Manager Utilities (Acting)	0488 248 621
NSW EPA	EPA Environment Line	131 555
NSW Public Health	Duty Officer	02 6764 8000 or 02 9391 9000
NSW Fire and Rescue	Duty Officer Guyra Fire Station	000 or 02 6779 1448
NSW WorkCover Authority	Duty Officer	131 050
NSW Police Force	Duty Officer	000 or 02 6738 4299
Ambulance Service of NSW	Duty Officer	000 or 131 233
POISONS Information	Duty Officer	131 126
Guyra Hospital	Duty Officer	02 6738 4000

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1. Executive Summary

This Pollution Incident Response Management Plan (PIRMP) has been prepared to comply with the directives introduced by the Protection of the Environment Legislation Amendment Act 2011 (POELA Act) that requires the preparation and implementation of a Pollution Incident Response Management Plan.

This purpose of the PIRMP is assist employees and management of the Guyra Sewage Treatment Plant to identify the potential risk of a pollution incidence and provides procedures and contact information to be used in the event of a pollution incident.

2. Objective and Scope

The purpose of this PIRMP is to assist employees and management of Armidale Regional Council to identify the potential risk of a pollution incident occurring, introduce measures to mitigate that risk and give direction in making quality decisions should a pollution incident occur.

This plan contains guidance in determining the appropriate actions to take to prevent material harm to the environment and how to respond should a pollution incident occur. The PIRMP also includes provision for record keeping, testing, reporting and document revision.

However, it is recognized that pollution incidents are not totally preventable. Therefore this PIRMP has been developed to achieve the following objectives:

- reduce the likelihood of a pollution incident occurring at the facility through identification of risks and the development of planned actions to minimise and manage those risks.
- ensure comprehensive and timely communication about a pollution incident to all staff at the premises, the Environment Protection Authority (EPA), other relevant authorities specified in the Act (such as NSW Ministry of Health, WorkCover NSW, and Fire & Rescue NSW) and people outside the facility who may be affected by the impacts of the pollution incident.
- ensure that the PIRMP is properly implemented by trained staff, identifying persons responsible for implementation and ensuring that the PIRMP is regularly tested for accuracy, currency and suitability.
- provide guidance on how to respond to an environmental pollution incident and how to record and report such an event.

The plan is to be kept in a prominent position at the Guyra Wastewater Treatment Works, with laminated copies kept in the water and sewer vehicles. All water and sewer staff and the overseer must familiarise themselves with the contents of this plan and refer to it in the event of any pollution incident.

2.1 Facility Covered by PIRMP

Guyra Waste Water Treatment Works is covered by this PIRMP which incorporates activities of Environment Protection Licence (EPL) 1671, being for the operation of the STP and the reticulation network feeding the STP.

2.2 PIRMP Review

The PIRMP is to be reviewed annually by the **Operations Engineer – Water and Sewer (ARC)** in conjunction with relevant Council staff including **Team Leader – Water and Sewer** and **Operators – Water and Sewer**.

When revisions are made to the PIRMP, the revised document will be re-distributed and redundant copies collected and discarded. The date of issue and revision number is to be recorded on the Revision History for future reference.

As part of the revision process, a Notification of Change Form, (**Appendix 1**), will be provided which must be signed by each responsible party indicating that the party has received a copy of the PIRMP assigned to that party has been updated. This form is to then be retained on file by the **Team Leader – Water and Sewer**.

2.3 PIRMP Training

To ensure that this PIRMP is properly followed in the event of a pollution incident, training programs shall be provided to relevant **Council Employees**. The objectives of the training program shall be as follows:

- *To ensure that **Council Employees** are knowledgeable of their roles and responsibilities concerning this PIRMP.*
- *To ensure that **Council Employees** are knowledgeable of the PIRMP's procedures to affect a safe and appropriate response to pollution incidents.*

Council Employees will receive training in the PIRMP appropriate to the level of their expected involvement. Council Employees working at the facility will receive training during initial employment orientation / induction and refresher training at least annually. Additional training will also be provided to employees whenever the PIRMP is changed. All Council Employees will receive training in the general PIRMP procedures and Standard Operating Procedures related to the PIRMP. Training shall cover routine pre-emptive inspections, incident discovery and management, standard operating procedures, notifications, incident response and best practice facility management.

2.4 PIRMP Drills & Exercises

To ensure that this PIRMP will meet current conditions and that all involved individuals will respond appropriately, the PIRMP will be tested on an annual basis. The testing will include at least the following:

- Reaction and accountability of facility personnel; and
- Adherence to PIRMP procedures.

All drills and exercises of the PIRMP will be documented, indicating the results of the exercise and any problems that were encountered, along with recommendations for PIRMP modifications.

3. Inventory of Pollutants

Potential pollutants kept on the premises or used in carrying out activities at the premises, including the maximum quantity of any potential pollutant that is likely to be stored or held at the premises are summarized below:

Pollutant Type / Substance	Solid, Liquid, Gas or Powder	Quantity	Location (see site plan)	Type of containment
Alum	Liquid	27,000 litre		Bunded tank
Sewage	Liquid	Ave 380kL per day	Throughout facility	
Fuel Oil	Liquid	20ltrs		Approved container

4. Nature of Pollution Incidents

Possible pollution incidents associated with the operation of the Facility are:

- Sewage overflow to waterway due to bypass/failure at STP
- Sewage overflow from reticulation system due to pump station failure and wet weather event
- Fire within the STP
- Spill of chemical, fuel, oils from containments, tanks etc.

5. Hazard Assessment

The following potential hazards have been identified as possible sources of pollution from the sewer system (see table following page):

Risk Identification & Management Plan

Pollution Hazard (Not limited to but including)	Risk Factors	Outcome	Likelihood / Consequence (Rating)	Pre – emptive Actions
Sewer Overflow to Waterway	Overflow into Laura Creek due to bypass/ STP failure/ electrical systems / supply failure	Contamination of waterways	Likely / Major (High)	Routine inspection of the plant. Bypass procedures
	Overflow out of reticulation system due to blockage and wet weather	Contamination of adjacent land and/or waterways	Likely / Moderate (High)	Routine reticulation inspection & maintenance

Sewer Pump stations SG1 & SG3 failure	Overflow out of reticulation system	Contamination of adjacent land and/or waterways	Likely / Moderate (High)	Routine inspection, scheduled maintenance and servicing of the pumps, standby pumps and spare parts
Fire	Electrical / mechanical equipment overheating, chemical reaction	Combustion creates smoke and oil residues	Likely / Moderate (High)	Routine inspection, fire protection for critical and high risk infrastructure
Chemical Spills	Chemical spills from ruptured or leaking storage containers	Contamination of adjacent land and/or waterways, creation of volatile fumes	Likely / Moderate (High)	Bunded area to contain spill, retain minimum quantities on site
Fail to report incident	Non compliance with statutory reporting	Penalty infringement notice	N/A	Prepare reports as required
Work Health and Safety	Personal injury to staff, contractors, general public attending the facility	Trauma, lost time, rehabilitation, compensation	Likely / Major (High)	Regular tool box meetings, SWMS, SOPs, staff training

6. Response Equipment and Features

The Guyra Wastewater Treatment Works is fenced to stop intruders and ensure safety. The site also has a number of active and passive pollution control/safety devices and equipment that can be used during a pollution incident.

Relevant details of pollution incident equipment and features are provided as follows:

Equipment	Location	Quantity	Maintenance Requirements / Standards
Emergency Showers	At Alum tank	1	Check frequently
Disposable overalls / rubber gloves / ear plugs	At main store	Many	Check before wearing while noting stock levels
Fire extinguisher	Located throughout plant	3	Six monthly inspection and tagging

Fire extinguisher			
Chemical Spill kit			
Breathing Apparatus Kit	STP office		Six monthly inspection and replenishment
Safety harness	STP office		Six monthly inspection and tagging
Gas detectors	STP office		Six monthly inspection and tagging
Fall Arrestor	STP office		Six monthly inspection and tagging
Hard Hats	STP Office		Six monthly inspection
First Aid equipment	STP office		Six monthly inspection and replenishment

Suitable signage indicating the location of incident response equipment and features and the first aid kits will be provided and maintained within the facility so that Council employees and contractor's staff faced with an incident and under pressure will confidently locate and select the appropriate type of equipment.

A list of emergency phone numbers will be clearly displayed at a location within the facility that can be seen by Council Employees, contractor staff and facility visitors.

7. Communication with Neighbours and the Local Community

Communicating with neighbors and the local community is an important element in managing the response to any pollution incident.

In a notifiable pollution incident the telephone should be used as a means of notifying those individuals/organisations responsible for activating this Plan and managing the incident response. Mobile phones will be the accepted means of communications.

Council has an obligation to inform members of the local community should a pollution incident occur that could affect their property or safety. Communication mechanisms include phoning occupiers of neighboring properties, issuing media releases and providing information on Council's web site.

The following notification and communication action plan will be applicable to a major pollution incident at the Guyra Wastewater Treatment Works.

PIRMP Community Notification and Communications Plan

Nature of incident	Impact on Community	Notification requirements	Responsibility	Notification Mechanism	Key message
Fire	Local impact, likely to be minor depending in the severity of the fire	EPA Owners/ occupiers of neighboring properties	Team Leader – water and sewer Operations Engineer	Phone call to EPA Phone call to owners/ occupiers	Date and time of incident Response actions taken Agency responding
Sewage overflow	Local impact, ranging from Minor to Moderate	EPA and downstream users	Team Leader – water and sewer Operations Engineer	Phone call to EPA Phone call / door knock to downstream users	Date and time of incident Response actions taken
Oil/Fuel Spill	Local impact, likely to be Minor	EPA, depending on severity	Operations Engineer	Phone call to EPA	Date and time of incident Response actions taken Type of oil / fuel quantity
Chemical / hazardous material spill	Local impact, likely to be Minor	EPA, depending on severity	Operations Engineer	Phone call to EPA	Date and time of incident Response actions taken Type of chemical & quantity

8. Minimising harm to persons on the premises

Staff are to maintain a normal risk assessment approach to work health and safety (WHS) when dealing with any environmental incident covered by this plan. All site hazards are to be identified after notification to authorities and prior to commencing any other activity. The risk posed to staff health and safety for each hazard is to be assessed and mitigated as appropriate. Particular reference is to be made to the relevant MSDS for any chemicals involved (note the location of the MSDS register at the Wastewater Treatment Works)

8.1 General Requirements

Most minor pollution incidents will not require the evacuation of all or part of the facility however it is acknowledged that any major incident may require the facility to be evacuated, of Council employees, contractor's staff and facility users in the event of a major incident is of the utmost importance.

In order to achieve a safe and timely evacuation, it is critical that an early warning of the pollution situation be communicated and action implemented to remove Council employees and/or contractor's staff from the hazard area. The decision to evacuate the building is to be taken by the **Team Leader – Water and Sewer** or the most senior staff member at the site and supported by facility personnel or as directed by a responding Emergency Service.

8.2 Evacuation Assembly Areas

Given the relatively small size of the site, low usage with the likelihood of few personnel present at any one time and the limited quantities of potential pollutants retained on the site that would be harmful to human health, the primary objective in the evacuation of the site will be to ensure all contractors, council staff and others that may be on site vacate the site as directed, the facility entry gates are closed and the contractor/Council staff waits for emergency services to arrive or other actions as directed by the **Team Leader – Water and Sewer**.

On arrival at the designated evacuation assembly point all employees will remain until the **Team Leader – Water and Sewer** has determined the status of all personnel and;

- accounted for all, or
- prepared a list of names of missing personnel and the location last seen.

For the purposes of this plan the following evacuation assembly points are applicable:

Primary Assembly Point is at the main entry gate to the Facility.

8.3 Post Evacuation Assembly Point

Once the facility has been evacuated to the Primary Evacuation Assembly Point and the presence of personnel confirmed, arrangements will be made by the **Team Leader – Water and Sewer and Operations Engineer** for Council employees and contractor's staff to be transported/moved to the Post Evacuation Assembly Point which for the purposes of this Plan is the Council Office Building, 158 Bradley Street, Guyra.

Incident debriefing and incident investigation will be undertaken at the Post Evacuation Assembly Point. Further management instructions will also be provided.



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10. Post Pollution Incident Activities

This section of the Pollution Incident Response Plan identifies those activities necessary to support Council staff and contractor's staff during and following a pollution incident and those activities necessary to restore operations at the **Guyra Sewage Treatment Plant** and associated **reticulation network**.

10.1 Recovery Operation

The recovery of operations and services will depend on the extent of damage suffered.

The **Team Leader – Water and Sewer** in collaboration with the **Operations Engineer - Water & Sewer** will need to prioritise activities that can be accomplished with available staff and resources.

Immediately following the emergency phase of an incident, the **Operations Engineer - Water & Sewer** will develop an operational recovery plan.

10.2 Incident Investigation (After Action Review)

A pollution incident must be investigated as soon as possible following its occurrence. The investigation is designed to determine why the incident occurred and what precautions can be taken to prevent a recurrence.

The **Operations Engineer - Water & Sewer** is responsible for ensuring that an incident investigation is conducted following all pollution incidents that occur at the facility.

10.2.1 Small Incident

For small incidents, the **Team Leader – Water and Sewer** will normally conduct the investigation.

10.2.2 Major Incident

For major pollution incidents where material harm to the environment is caused or threatened statutory authorities and emergency response agencies will generally be involved in conducting the investigation.

The **Team Leader – Water and Sewer** along with the **Operations Engineer - Water & Sewer** will assist the authorities as needed.

10.3 Documentation

Documentation of response activities is of critical importance following a pollution incident. All records and forms used during the incident to document activities must be retained for future reference.

Following a pollution incident or emergency situation, the **Team Leader – Water and Sewer** will have the responsibility for collecting all records and forms used during the incident.

These records will be used for several purposes, such as incident investigation, insurance claims and potential legal actions.

The **Team Leader – Water and Sewer** must prepare a report documenting activities that took place during a major pollution incident.

The report of the **Team Leader – Water and Sewer** and all related documentation will be submitted to the **Operations Engineer - Water & Sewer** for review and necessary follow-up actions.

The **Operations Engineer - Water & Sewer** will make any necessary follow up reports to the **EPA or other Agencies**.

10.4 Incident Impact Assessment

Following an incident, an assessment of impact that has occurred to the reticulation network, the STP, equipment or environment must be conducted which aims to identify repairs or restoration that must be initiated to minimise further damage and restore operations / services or to rehabilitate the environment.

The **Operations Engineer - Water & Sewer** will have the primary responsibility for conducting the damage assessment following an incident.

Assistance will be obtained as needed from facility employees and outside organisations, such as ecologists, engineers and clean up contractors.

10.5 Incident Debriefing

The purpose of incident debriefing is to inform employees about any hazards that may still remain on the facility property following the incident and to identify unsafe conditions that may still exist.

10.6 After Action Review & PIRMP Update/Amendment

This will occur **within 30 days** of any pollution incident.

The AAR will analyse the actions that took place during the pollution incident (both good and bad) and will seek to identify opportunities to improve the effectiveness of the PIRMP, through Prevention, Preparation, Response and Recovery procedures in place for the facility.

The AAR findings will produce Actions to amend, modify or may determine no change requirements are necessary for the PIRMP.

Appendix 2: Pollution Incident Report Form

Date of Incident:		Time of Incident:	
Name of Reporting Person			
Location of Incident Where did it occur?			
Type and Quantity of Material Involved			
Outline Actions Initiated in Response to Incident			
Was it necessary to initiate the Major Incident Notification Protocol ?			
Was the community notified?			
Was action in accordance with SOPS? If not – why?			
Is there a need to review SOP in response?			
Date and Time of details provide to: Relevant Supervisor			
Other Matters			
Management Acknowledgement:			
Dated:			

Appendix 3: Sewer Overflow Protocols

Upon notification of a sewer overflow, proceed in the following manner:

- Note the time that the sewer overflow information was received from the public
- Proceed to site as a matter of urgency
- Conduct site specific WHS Risk Assessment
- Conduct site specific Environmental Risk Assessment / Response by answering the following questions:

Q1 Is the overflow able to be contained in an area that will allow all discharge to be collected / disinfected?

Yes: Proceed to clear the blockage and clean up in a normal fashion.

No: Go to Q2

Q2 Is the overflow discharging into a waterway, school, hospital or other critical location?

Yes: Advise **Team Leader – Water and Sewer** immediately. If **unavailable**, advise **Operations Engineer - Water and Sewer** who will consider whether to report the incident to EPA on 131555. EPA License number is 1671. Advise **Operations Engineer** of progress as soon as possible.

No: Proceed to clear the blockage and clean up in a normal fashion.

Q3 What is your estimate of flow rate of the discharge in litres per second (an easy way to do this is to think about how quickly the flow would fill a normal 7 litre bucket).

Record this figure.

Q4 Is the blockage able to be cleared quickly?

Yes: Proceed to clear the blockage and clean up in a normal fashion.

No: Devote extra resources to contain the flow in a pond structure and pump to a truck or clear downstream manhole.

Note: this is a judgement call depending on the time that the extra resources will take to be called into action.

- Once blockage is cleared, note time and report to **Operation Engineer**
- Using the Overflow Water Sampling Kit, collect 2 sets of water samples – one from immediately downstream from the point of overflow and one from immediately upstream from the point of overflow. Each point requires a 1000ml glass sample jar and a 1000ml plastic bottle sample. The plastic bottle sample must be filled completely (to exclude air) and stored in a cool dark environment (esky with ice bricks or fridge). The samples should be sent to a NATA accredited lab within 24 hours.
- Secure site from public access until site is cleaned and disinfected.
- Report the nature of the blockage and any information that may assist the future prevention of the incident recurring to the **Operations Engineer**.

Appendix 4: Surrounding land owners

Name	Address	Contact Number
Mrs. Noeline Thomson	7878 Guyra Rd, Guyra, 2365	Tel: 02 6779 1051
Mr. Barry Sweeney	143 Ollera St, Guyra, 2365	Mob: 0413 336 822
Mrs. Dayna Starr	34 Suttons Lane, Guyra, 2365	Mob: 0402 916 299
Mr. Bob Williamson	80 Neeworra Road, Guyra, 2365	Mob: 0403 191 400
Mr. Neil Saunders	190 Neeworra Road, Guyra, 2365	Tel: 02 6779 1160

Appendix 5: SOP for Decant Mechanism Bellows Failure Response

PURPOSE AND SCOPE

The purpose of this procedure is to define an incident response in the event of a discharge resulting from the rupture of rubber decanting bellows in the Sewage Treatment Plant (STP) aeration tank.

PROCEDURE/STANDARD

- Notify **Team Leader – Water and Sewer** immediately.
- **Team Leader – Water and Sewer** to notify **Operations Engineer – Water and Sewer** and contact EPA Environment line to report incident.
- Notify downstream neighbours who may be affected by the incident.
- Contact laboratory to test the samples at the weir and downstream of the discharge point.
- Organise and get prepared for replacing Decant Mechanism Bellows. Refer SOP for changing the Decant Mechanism Bellow.
- Report the details of the incident on an Incident Notification Report and refer to **Operations Engineer – Water and Sewer**.

BENEFIT OF COMPLIANCE TO PROCEDURE:

- Limit environmental damage
- Health and safety of public protected.

CONSEQUENCE OF NON-COMPLIANCE TO INSTRUCTION:

- Extended environmental damage
- Violations and/or fines from Regulatory Agencies.

REVIEWED BY:

APPROVED BY:

DATE:

DATE: