TEMORA SHIRE COUNCIL



POLLUTION INCIDENT RESPONSE MANAGEMENT PLAN

TEMORA SEWERAGE SCHEME

ACTIVE

Review Details

ABOUT THIS RELEASE

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REVIEW

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1. Introduction

In February 2012 an amendment to the Protection of the Environment Operations Act 1997 introduced a requirement for all licensees to prepare and implement a Pollution Incident Response Management Plan (PIRMP) for each of its licensed activities in accordance with the requirements set out in Part 5.7A of the PEOA Act 1997.

This plan has been developed to document the processes required to prepare for and respond to pollution incidents at the Temora Sewage Treatment Plant (TSTP) and associated reticulation network and ensure that hazards to the environment, human health and safety are managed effectively.

2. Scope

This PIRMP applies to all activities relating to Temora Sewerage Scheme (EPA Licence No.2523).

2.1 Objectives

The objectives of this plan are to:

- Ensure comprehensive and timely communication about a pollution incident to staff, the NSW Environmental Protection Authority (EPA), other relevant authorities specified in the Act (NSW Ministry of Health, WorkCover NSW, Fire and Rescue and Council) and any persons who may be affected by the impacts of a pollution incident.
- Minimise and control the risk of a pollution incident occurring within the Temora sewerage scheme, by requiring identification of risk and the development of planned actions to minimise and manage those risks.
- Ensure the plan is effectively implemented by trained staff, identifying persons responsible for implementing it, and ensuring that the plan is regularly tested for accuracy, currency, and suitability.

3. References

EPA NSW Environmental Guidelines: Preparation of pollution incident response plans Local Government Act 1993 Protection of the Environment Operations Act 1997 Protection of the Environment Operations (General) Regulation 2009 Public Health Act 1991 Water Administration Act 1986

4. Definitions

Pollution incident is defined as, an incident or set of circumstances during, or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise (see the POEO Act 1997).

Material harm to the environment is defined as, actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations).

Loss is defined as, reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.

Immediately is defined as, promptly and without delay.

5. Responsibilities

Managers are responsible to:

Ensure all workers are aware and are involved in developing this plan.

Ensure all workers are adequately trained in the operation of this plan.

Provide adequate resources to develop and manage this plan.

Provide for the implementation of this plan in their sections and area(s) of control.

Consult and communicate with workers ensuring they are familiar with this plan.

Ensure full staff compliance with this plan.

Participate in review of this plan as required.

Supervisors are responsible to:

Comply with this plan. Ensure implementation of this plan in their section and area(s) of control. Participate in review of this plan as required. Provide training and supervision.

Workers are responsible to:

Co-operate with their manager / supervisor to ensure implementation and compliance with this plan.

Attend and participate in training relating to this plan.

Participate in review of this plan as required.

6. Pollution Incident Response Management Plan

6.1 Sewerage Scheme Overview

The original sections of the Temora Sewerage Scheme were constructed and commissioned in the late 1930's with the original treatment plant having a design capacity of 5000EP. The scheme has been significantly augmented over the past 80 years and now consists of an 4500EP treatment plant, approximately 54km of reticulation main and 5 reticulation pump stations. The Temora STP currently treats approximately 720kL of sewage daily in dry weather, potentially reaching 6 times this flow during heavy rain periods. The current treatment process includes screening, primary sedimentation, aeration and retention.

6.2 Hazard and Risk Assessment

Hazards and risks associated with activities of the Temora Sewerage Scheme causing potential material harm to human health or the environment include:

Sewage discharge (raw or partially treated), potentially be caused by;

- Storms (lightning/heavy rainfall/wind) causing power failure or infrastructure damage
- Reticulation blockages
- Damage to reticulation network (contractors or other damage during excavations etc.)
- Infrastructure failure due to age
- Communications failure
- Level sensor failure
- Excessive flows
- Mechanical break down
- Power outage
- Treatment plant blockage
- Lagoon failure
- Sewerage reticulation network contamination (chemicals)
- Maintenance and or capital upgrade works

Chemical spill, potentially caused by:

- Delivery incident
- Inappropriate chemical use
- Fire

A Risk Assessment and Action Plan for the Temora Sewerage Scheme is located in Appendix B of this document.

6.3 Incident Response

This section details the response requirements in the event of an incident.

6.3.1 Pollution Incident

A pollution incident is required to be notified if there is a risk of 'material harm to the environment' that is not trivial.

If there is immediate threat to Human health or Safety, at first instance call triple zero "000" ("112" if using a mobile). Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents.

If the incident does not require an initial combat agency, or once the 000 call has been made, the Manager of Engineering Services is to notify the relevant authorities 'Immediately' in the following order;

1.	EPA Environment Line (written report to be provided within 7 days)	131 555
2.	NSW Health	02 9391 9000
3.	SafeWork NSW	13 10 50
4.	Fire & Rescue	1300 729 579

5. Any other persons who may be affected by the incident - Land owners, businesses, sporting clubs, police, etc.

The 24 hour emergency number for Temora Shire Council is: (02) 69 801100

Temora Sewerage Treatment Plant emergency evacuation point is located at outside the

compound at the front main access gate adjacent to the emergency evacuation point sign.

In all situations where there is damage and/or loss to private property or a member of the public due to an incident related to this plan contact:

Council's Enterprise Risk Manager (02) 69801100

6.3.2 Incident Response Process Diagram

The incident response required depends on the type and severity of the incident that has occurred. A flow diagram is located in Appendix C of this plan detailing the sequence of response in the event of a sewage overflow / bypass for both minor and major incidents.

6.4 Community Notification

Impacts on the community due to sewage distribution and treatment incidents are variable and depend on location, volumes of spills or other factors. Communication methods will be used on a case by case basis and in all situations Temora Shire Council staff will attempt to provide early warning to directly affected premises by phone call or site visit. Early warning is to include;

- 1. Details on the nature and severity of the incident,
- 2. How those affected can prepare and respond, and
- 3. Provide important advice such as avoiding contact and use of affected areas.

Where early warning is not possible Temora Shire Council will provide notification and communication during and after an incident to advise those affected with information, advice and updates. Notification and communication methods will be determined on a case by case basis and may include the following;

- Phone calls
- Media releases (radio/television/newspaper/internet/social media as required)
- Site visits/door knocking
- Letter drops
- Warning signs
- Other methods as the situation requires

In the event of a major chemical or sewage spill into a waterway, Temora Shire Council will barricade and signpost areas of the affected waterway that may be used for recreational purposes. The signs are to warn the community of the contamination and advise them to avoid activities such as swimming until contamination has cleared.

Contaminated land is to be disinfected, ponded sewage pumped out and faecal coliforms are to be monitored until background levels are reached. Regular communication and notification of affected persons is to be provided until the incident and clean-up of the impacted site and affected areas have been completed.

6.5 Incident Investigation

All pollutions incidents will be investigated by Councils Enterprise Risk Manager. For all other incidents, the Engineering Services Manager will determine whether an incident investigation will be conducted. All sewage overflow incidents must be recorded and reported to the Engineering Services Manager using the reflect.net.

6.6 **Pre-emptive Measures**

The first priority for pre-emptive measures in relation to a potential pollution incident is to eliminate hazards that pose a risk of causing a pollution incident. If this is not possible, other means of risk control such as substitution, engineering and, or administration shall be employed to mitigate the likelihood of a pollution incident occurring.

6.6.1 Engineering Controls

The following pollution incident prevention features are currently operational within the Temora sewerage scheme;

- TSTP inlet works step screen has a high level bypass to prevent overflow.
- TSTP pump station has;
 - Level sensors and an SMS/email alarm system to alert operators of failure or conditions that may result in an overflow.
 - 2 sets of 2 x 8kw submersible pumps that have the ability to work independent of each other in the event of pump failure.
 - A backup generator which automatically operates in the event of power failure.
- TSTP has 2 x primary sedimentation/aeration lagoons of which only one operates during the normal treatment process. Current TSC procedure is to ensure one of the primary lagoons is empty at all times, this allows an additional 20ML storage in the event there is a requirement to store untreated or partially treated sewage prior to overflow of the retention lagoons.
- All sewerage pump stations have telemetry installed including inflow volume monitoring, high level warning, pump operation and fault monitoring.
- Council potable water metres have backflow prevention devices fitted.

6.6.2 Administrative Controls

Temora Shire Council undertakes monitoring and preventative maintenance to reduce the potential for incidents in all areas of the Temora Sewerage Scheme. This includes daily, weekly and longer term inspections, preventative maintenance and capital renewal works.

Council has one management staff member and one sewerage operator on call 24 hours a day 7 days per week. Access to staff on call is directed through the Council 24-hour emergency number listed in section 6.3.1.

Council currently lacks documented procedures and system forms associated with the above described activities, however this is an item included in the Risk Assessment and Action Plan and procedures will be developed in due course.

6.7 Training

Managers, Supervisors and relevant Workers, shall be provided induction training in this plan, and the use of associated forms.

Additionally, relevant staff will be involved in an annual exercise / drill to test the implementation of the plan. In the event of a significant incident, an investigation and debrief

will be conducted, documentation updated (if required) and staff will undertake re-induction training.

7. Records Management

7.1 Location and Maintenance

Copies of the PIRMP shall be maintained at the following locations;

- TSTP (located at the main entrance in a water proof sleeve).
- Temora Council chambers, available to the public on written request, free of charge.
- Temora Shire Council website
- Sewerage operator work vehicle

Operational documents and identified records associated with this plan shall be stored and maintained in an adequate location. Details of document and record locations are listed in Appendix E of this plan.

Records must be:

- Stored and maintained for a period of 7 years,
- Be made available to authorised persons in compliance with legislative requirements.

8. Plan Review

This plan will be reviewed under the following circumstances;

- Biennially in September in conjunction with Councils EPA annual return submission,
- Following a change in legislation, or
- Following a change in process resulting from testing or activation of the plan; or
- Following the planned implementation of a new system, new technology or new process relating to the Temora sewerage scheme.

9. Plan Testing

This plan will be tested as follows:

- At least once every 12 months, and
- Within one month of activating the plan.

10. Appendices

Appendix A – Site Plans and Reticulation Network Map

Inlet Works



Maturation Lagoons



Reticulation Network



Appendix B – Sewerage and Recycled Water Risk Assessment and Action Plan

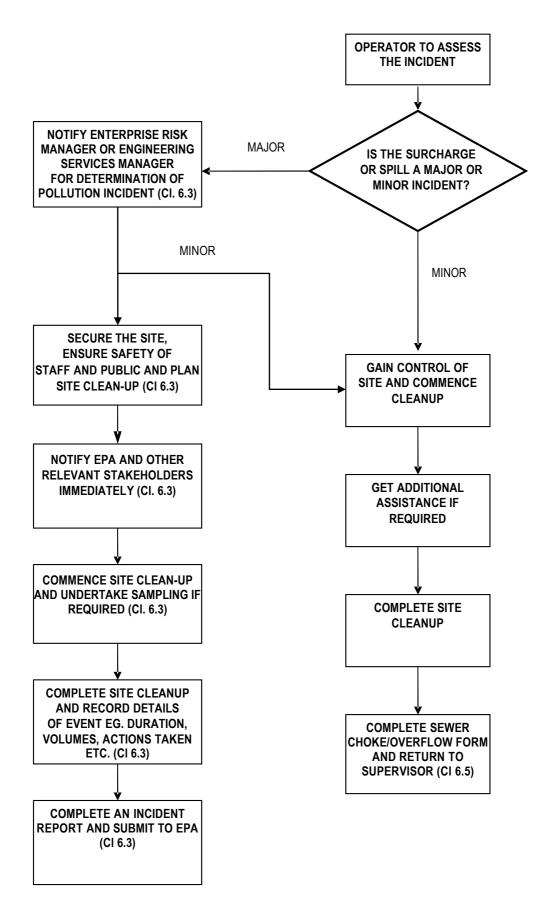
Ref No	Item / Activity /Process	Potential Hazard / Risk	Current Control Measures	Risk Class	Proposed Additional Risk Control / Action	Responsible Person	Date Completed	Residual Risk
	Management		I		I			
1.	System management	System failure Suspension of operation Legal action Human health incident	Some management training undertaken Some policy and procedure in place		 Engage a consultant to complete an audit/review of the current systems, and assist in developing up to date, holistic, comprehensive management framework relating to sewerage and recycled water operations at Temora Shire Council 	ESM	100% Audit/Review completed by GHD in 2017.	
		Pollution incident Inability to respond to an emergency		1	 Investigate decoupling of the storm water/ recycled water systems (removal of Callaghan Park dam and Railway Dam from recycled water system) 	ESM	90% IWCM underway with Public Works.	2
					 Develop Integrated Water Cycle Management Plan Develop Recycled Water Management Plan (RWMP) 	ESM ESM	0% RWMP will follow IWCM.	
2.	Staff training	Inadequate management of sewerage and recycled water system Pollution incident Human health incident Non-compliance with EPA licence conditions Unable to respond to major system failure	Recycled water short course training undertaken for all sewer and recycled water staff Sewer trainee undertaking certificate 3 in Water Operations	1	 Develop specific sewerage and recycled water training plan for staff involved in sewerage and recycled water operation and management. 	ESM / HR	0% No Action. Currently March 2022 advertising for team supervisor.	2
3.	Financial management	Unsustainable system Non-compliance with regulatory authorities	Sewerage reserve fund Annual maintenance budget	1	6. Following system review, investigate and report on all areas of financial management of water and sewerage (fees & charges, income, expenditure, reserves, etc.)	ESM	90% IWCM underway. TBL reports improving.	2
4.	WHS management	Suspension of operation Legal action Human health incident	Some WHS policy Some operational procedures	1	 Staff immunisation audit/review and report recommendations WHS audit of all recycled water and sewerage operations (operational procedures, WHS forms, 	ERM ERM / ESM	100% 0% No Action	2

Ref No	Item / Activity /Process	Potential Hazard / Risk	Current Control Measures	Risk Class	Proposed Additional Risk Control / Action	Responsible Person	Date Completed	Residual Risk
					 system signage, emergency response equipment, site security, etc.) 9. Specific WHS action plan and development of WHS framework, procedures and system forms. 	ERM / ESM	25%	
5.	Maintenance and Capital Work Quality	Assets not reaching design life Failing infrastructure	Experienced staff		 Staff training in Australian Standard and Water Service Australia (WSA) codes Development of standardised Quality Work Methods 	ESM ESM	0%	
		Increased sewer chokes Pollution incident Human health incident		2	for sewer and recycled water maintenance activities to ensure quality and consistency (standard drawings)		10 %	2
6.	 EPA Licence pollution monitoring (sampling) control points faecal coliform non-compliance 	Discharge of non- compliant recycled water Financial penalties Suspension of licence Inaccurate test results Human health incident	Chlorine disinfection of recycled water	1	 12. Develop sampling procedures addressing sample quality and worker safety (Work Method and SWMS) 13. Investigate treatment process effectiveness (currently don't meet EPA pollutant limits) 	ERM / ESM ESM	0% No Action 90% IWCM	2
	Sewage Treatment	t Works	1			1	1	
7.	Sewage contamination - trade waste and	Adversely affect treatment process at treatment works	Trade waste policy		14. Audit of registered trade waste businesses - system maintenance (grease traps, etc.)	ESM	50%	
	chemicals	Reticulation network choking and potential		2	15. Community awareness regarding the effects of trade waste (Letter to businesses, Narraburra news etc.)	ESM	0%	3
		damage			16. Trade Waste Policy and Associated Fees and Charges endorsed and implemented	ESM	75%	
8.	Disinfection	Non-compliance with EPA	Nil		17. Assess the suitability of disinfection	ESM	90% IWCM	
		licence conditions Human health incident			18. Upgrade chlorine dosing shelter meeting EPA requirements (bunding, signage, cover)	ESM	0% No Action	
				1	19. Connect the Airport effluent line to chlorine dosing system	ESM	0% No Action	2
					20. Develop water quality monitoring schedule following chlorine disinfection and develop emergency	ESM	0% RWMP	

Ref No	Item / Activity /Process	Potential Hazard / Risk	Current Control Measures	Risk Class	Proposed Additional Risk Control / Action	Responsible Person	Date Completed	Residual Risk
					procedures for water quality exceeding critical limits			
9.	TSTP – General operation and maintenance	Non-compliance with EPA licence conditions Human health incident	Informal inspection	1	21. TSTP operation and maintenance procedures	ESM	0% No Action	2
	Sewerage Reticula	tion Network	1			1	-	1
10.	Reticulation network – age / condition	Structural failure Discharge of untreated sewage Human health incident Pollution incident Council unable to fund replacement of network Unable to respond to major failure of network	Some CCTV inspection undertaken Council has some funds in reserve	1	 22. CCTV inspection and asset condition rating 23. Defect identification, classification and GPS mapping using reflect defect management software 24. Audit / review of asset valuation, condition, remaining useful life, current replacement costs 	ESM ESM ESM	Ongoing 100% 100%	2
11.	Storm water ingress	Treatment bypass at treatment works Discharge of untreated sewage Treatment works pump station flooding Inadequate retention time at treatment works Human health incident Pollution Incident Overloading of reticulation network	Nil	2	 25. Investigate flow monitoring at both treatment works and throughout reticulation network at critical junctions 26. Manhole maintenance program (lid replacement, joint sealing, replacement, etc.) 	ESM	100%	3
12.	Reticulation network preventative maintenance	Increased main chokes Human health incident Pollution incident Network structural	Some foaming completed in previous years	2	 27. Develop routine preventative maintenance program including; Jetting (mains and service junctions where required) Foaming 	ESM	Ongoing	3

Ref No	Item / Activity /Process	Potential Hazard / Risk	Current Control Measures	Risk Class	Proposed Additional Risk Control / Action	Responsible Person	Date Completed	Residual Risk
		damage Limited knowledge of network condition			 Combination cleaning / de-silting CCTV inspection Smoke testing 			
13.	Reticulation network mapping and access – (buried manholes)	Unable to access network for inspection, preventative maintenance, chokes, emergencies, etc. Unable to locate unmapped network	GIS map layer available (accuracy is only fair)	2	 28. Review procedure for main extension relating to work as executed plans by both Council and third parties 29. Record where it is assumed manholes are buried and/or unserviceable 30. Gradual audit and update of GPS coordinates for network manholes using GPS survey 	ESM ESM ESM	20% Draft junction cut-in procedure. Ongoing Ongoing	3
14.	Sewer choke maintenance	Discharge of untreated sewage Pollution incident Human health incident	Confined spaces procedure	2	 31. Develop sewer choke operational procedure and SWMS, including clean-up of any discharge 32. Investigate purchase of emergency response equipment 33. Develop electronic sewer choke register including GPS mapping 	ESM ESM ESM	50% 0% 100%	2
15.	Reticulation pump stations – maintenance and communication	Discharge of untreated sewage Pollution incident Human health Incident Odour complaints Unable to respond to major failure	3 of 4 pump station have some type of warning system. Treatment works pump station has SMS/Email alert of potential issues (high level, failure, etc) Airport pump stations have sound alarm and rotating beacon	1	 34. Develop an operation and maintenance plan specifically for Council pump stations 35. Investigate installation of SMS/Email warning for all pump stations 	ESM ESM	0% 100%	3
	Recycled Water Re	eticulation Network					1	
16.	Effluent/Stormwat er Storage dams	Non-compliance with NSW Office of Water Public health Incident	Aeration at Gardener street dam Fountain at Browns dam Monthly water quality testing undertaken	1	36. Investigate improved pre-treated water quality (dam flocculation, carp eradication, rock lining of storage dams, etc.)37. Rectify bank erosion (rock lining)	ESM ESM	Ongoing 50%	2

Ref No	Item / Activity /Process	Potential Hazard / Risk	Current Control Measures	Risk Class	Proposed Additional Risk Control / Action	Responsible Person	Date Completed	Residual Risk
17.	Irrigation Pump Stations	Pollution incident Human health Incident Odour complaints Unable to respond to major failure	Sheltered Ad hoc maintenance Progressively upgraded	1	38. Complete progressive upgrade of pump stations (shelters, VFD pumps, chlorine dosing, etc)39. Investigate energy saving initiatives	ESM ESM	100% 100%	2
18.	Third party use of recycled water	Non-compliance with NSW Office of Water Public health Incident Legal action against Council	Some third parties connected to Council pump lines where some filtration is taking place	1	 40. Develop and implement legal agreements with third party users 41. Review third party pumping arrangements (Council pump or private pump). Where possible bring third party onto Council system. Electronic flow monitoring, water filtration/disinfection. 42. Where private pumping is undertaken investigate electrical arrangements (Council paying for power) 43. Audit of current third party end use, including procedures and control measures 	ESM ESM ESM	0% 90% IWCM 100% 0% RWMP	2
19.	Backflow prevention	Human health incident Non-compliance with NSW Office of Water	Back flow prevention devices in place at Council utilisation areas Testing undertaken annually in November	1	44. Audit Council utilisation areas ensuring water meters have backflow prevention devices fitted	ESM	100%	2
20.	Irrigation	Human health incident Non-compliance with NSW Office of Water	Off peak irrigation	1	 45. Review current non treatment barriers 46. End point water quality testing 47. Develop irrigation time table and utilise automated afterhours irrigation of parks and gardens 48. GPS locate and map irrigation network 	ESM ESM ESM TSM	90% IWCM 0% RWMP 100% 90%	2
21.	Soil analysis	Environmental Harm	Nil	2	49. Receiving environment soil analysis to determine the capability of the soil receiving nutrients, metals and salts. (GHD Rec)	TSM	100%	2



Name	Manufacturer	Maximum Volume Stored	Location
Chlorine	Orica	2000L	TSTP
Diesel	BP	100L	Backup Generator
Unleaded Fuel	BP	40L	Jetting Machine
Disinfectant	Rivchem	40L	Depot
Sewercide	Momar	40kg	Depot
Rootex	Momar	500g	Depot
Hydro Clean	Momar	75L	Depot
Oil	BP	20L	Depot
Glyphosate	Nufarm	20L	Depot

Appendix D – Chemical Register

Appendix E – Personal Protective Equipment

PPE	Location Stored
Hearing protection	Depot store / plumbers truck
Sunscreen	Depot store / plumbers truck
Gloves – rubber, leather and material	Depot store / plumbers truck
Gumboots	Depot store
Disposable overalls	Depot store
Face masks	Depot store
Safety sunglasses / Safety goggles	Depot store / plumbers truck
First aid kit	Depot store / plumbers truck
Gas monitor	Depot store
Fall arrest system	Depot store
Safety clothing (hi-vis, long pants, long sleeves)	Issued to staff
Steel capped boots	Issued to staff

Appendix F – Register of Identified Records

Item	Location
EPA - Environmental Protection License	EPA website, TSTP, work vehicle and Council website
Pollution Incident Response Management Plan (PIRMP)	TSTP, work vehicle and Council website
Council Policy and Procedure	Council website
TBL Sewerage Performance Report	NSW office of water online portal
EPA Annual Return	Recorded in TRIM
TSTP Inflow Monitoring	Centratech Systems IRRInet online portal
TSTP Outflow monitoring (pumped and overflow)	Centratech Systems IRRInet online portal
Third Party Water Delivery Records	
Third Party User Agreements	
Water Quality Monitoring Records	T:\engineering works\ water and sewer, and displayed in accordance with EPA requirements for publishing pollution monitoring data
Backflow Prevention Inspection Reports	Councils network drive T:\engineering works\ water and sewer
Training Records	Councils network drive T:\business services\human resources\payroll\staff training
Safety Data Sheets	Smart SDS software program
Equipment Maintenance Records	
Choke, Bypass, Overflow Records	Councils network drive T:\engineering works\ water and sewer
Capital and Maintenance Work Records	Councils network drive T:\engineering works\ water and sewer
Sewerage Scheme Management Plan	
Recycled Water Scheme Management Plan	
Operation and maintenance manuals	
Sewerage Asset Register	T:\Engineering Works\Administration & Legislative\Asset Management\Sewer\Asset Sheet & Revaluation